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Serial Verb Constructions in Pitjantjatjara and Yankunytjatjara

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ABSTRACT

This study looks at serial verb constructions in two dialects of the Western Desert language of Australia, Pitjantjatjara and Yankunytjatjara. With a Role and Reference Grammar analysis, the paradigm allows us to look at the constituents for logical structure, and marking of macroroles. We find that core and peripheral argument phrases are marked by case with ergative nominal marking and accusative pronoun marking. Dependent marking is on the phrase level and there is no verb agreement for number, gender or person marking on the verb. Simple verbs use endings for tense, aspect, mood and status. The operator projection shows the nature of linkage between the verbs involved in multi verb structures. There is a serial participle marked on the members of these constructions and a finite verb that is typically clause final. We look at whether these meet the criteria for serial verb constructions and find that in some nuclear cases there is evidence that they do, with sharing of arguments and a single action implied. Serial verbs can form nuclear or clausal cosubordinate nexus junctures.

1 Introduction

Several linguistic features have motivated this study. We will look at whether the serial verb construction often found in African, Asian and Austronesian languages is evidenced in the Western Desert group. Dixon (2006:344ff) states that serial verb constructions are not common in Australia but looks into evidence that they may exist in Dyirbal. The fact that many structures are common between Australian languages, in particular those outside the Top End, provides a fascinating window into how languages evolve and spread.

The grammar will be discussed under the paradigm of Role and Reference Grammar (henceforth RRG). RRG is intended to be able to be used globally for the description of any language so is a good candidate in which to conduct the study. RRG's layered structure of the clause will allow us to look at the arguments and non-arguments of the predicate and how they are marked in P/Y. We will look at simple verb constructions to see how tense, aspect and mood are marked, and then use this to study multi verb constructions. Central to this is a study of nexus juncture relationships. The operator projection will allow us to see the scope of the operators, and therefore the type of joins at nuclear, core and clause level. With the constituent projection, we can show how the arguments are shared, whether clauses are subordinate, and whether any multiple verbs can be classed as serial verb constructions. RRG also has the concept of macroroles as shown in the logical structure and this is important in comparing ergative and accusative systems to determine the actor and undergoer. Where arguments are shared by two adjoining predicates there is a suggestion of serial verb formation.

1.1 Methodology

Data from the published literature and online resources will be used to investigate and illustrate each point. Leipzig glossing will be provided with a free translation. The RRG projections will be used in places to show the underlying construction and the logical structure as codified by RRG will show the semantic macroroles. The last section will sum up the findings, put them into context and propose possible avenues for future research.

1.2 Structure of the paper

After looking at the background of P/Y, an outline of RRG and the nominal case system, we will look at the verbs in P/Y. There are four verbal conjugations in Pitjantjatjara and Yankunytjatjara (Goddard, 1993:11). Light verbs ('having', 'being') can become adjectival suffixes to nominals. We will analyse different types of multi verb system, looking at examples of serial verb constructions, coordination and subordination. In serial verbs a sequence of verbs act as one predicate (Aikhenvald, 2006). A detailed look at the sharing of predicate arguments will help shed light on the type of nexus and level of juncture. Causation is one example of where multiple verbs may co-occur both in nuclear and causal constructions. This will touch on the clause linkage theory as described in Song (1996:110-111), which can be used to establish how closely bonded the clauses in a sentence are.

2 Background to Pitjantjatjara, Yankunytjatjara and the Western Desert languages

2.1 Australian languages

There were around 250 Aboriginal languages before Europeans arrived in 1788 (Bower, 2010). These were spoken in social groups ranging from less than a hundred to several thousand members. It has been estimated that there were an estimated 600 social units or tribes, neighbouring tribes often speaking dialects of the same language. Around 50 languages have become extinct and 100 endangered; there are attempts to resuscitate some of them through intensive language description and teaching (Dixon, 2011:18).

There are some features in general that Australian languages share. Almost all have three numbers in pronominals; single, dual and plural (Dixon, 2011:3). Another general characteristic of Australian languages is agglutination. There are three basic word classes, based on how they inflect: verbs using suffixes to indicate tense, mood and so on; nominals inflecting for case; and particles with no inflection (Blake, 1987:2-3). The use of suffixes is widely used in changing one part of speech to another (Blake, 1987:8). The ergative case system found in around 15% of world languages applies to almost all Australian ones, and marking generally allows freedom of word order (Blake, 1987:9-10).

Phonologically the vowels a, i, and u and longer versions are found in the majority; with voiced/unvoiced consonants there is usually no distinction (Blake, 1987:10). However the languages vary widely in the number of phonemes. Dixon (2011:3) cites as extremes Nyawaygi from near Townsville with 12 consonants and 3 vowels; Cape Yorks, Anguthimri with 29 consonants and 17 vowels. P/Y has 17 consonant and 6 vowel phonemes.

The distribution of Pitjantjatjara and Yankunytjatjara is illustrated in figure 1, just south of the centre of the map. Figure 2 shows the higher concentration of languages in the Top End.

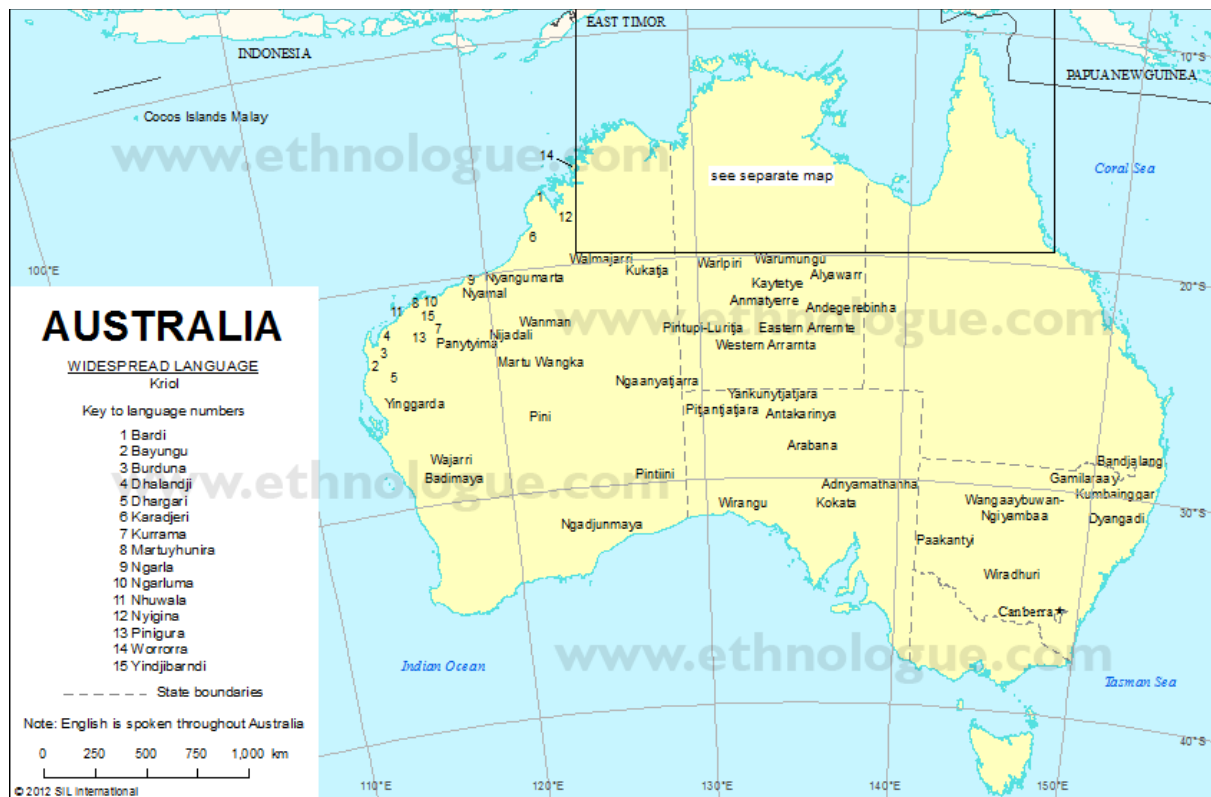


Figure 14: Australian language locations.

From http://www.ethnologue.com/map/AU__

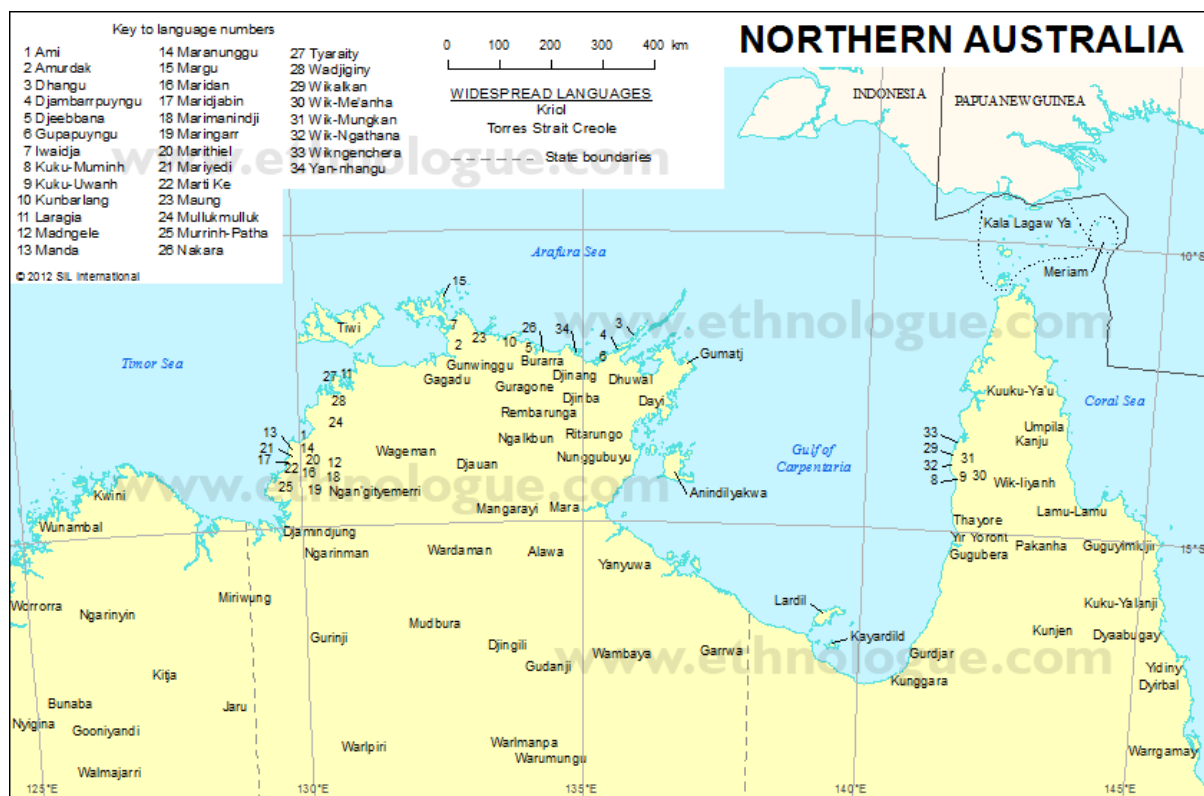


Figure 15: Northern Australian language locations.

From http://www.ethnologue.com/map/AU_n

2.2 Western Desert

Pitjantjatjara and Yankunytjatjara are two dialects of the Western Desert language group found in the western part of Australia's central desert (Bowe, 1990:1). This is the largest Aboriginal language group, stretching from Port Hedland in the west, south to Kalgoorlie and into the centre around Alice Springs (Anon, 2002), and is part of the Pama-Nyungan family (Bower & Atkinson, 2012). There are a large number of dialects, with varying degrees of mutual intelligibility (Goddard, 1993:1).

Pitjantjatjara and Yankunytjatjara are mutually intelligible, but there are differences in some common words and in the accent (Goddard, 1993:1). These differences have been reflected in the names used for the dialects: the words for come/go *pitjantja*; *yankunytja* (Goddard, 1993:2), *tjara* 'having'. Goddard (2011) uses the term *wangka* – a way of speaking, rather than the traditional notion of language. In this study where examples specify Pitjantjatjara and Yankunytjatjara it will be stated; otherwise the abbreviation P/Y will be used where an example applies to both. Goddard (1993:1) makes the point that the two dialects are similar enough to be covered by a single grammar and dictionary.

These languages are amongst the stronger ones spoken, but estimates of speaker numbers vary; around 1600 people in Central Australia (Goddard, 1993:cover). However Bowe

(1990:1) cites 4000-5000 speakers of Pitjantjatjara and 2-300 of Yankunytjatjara. While regarded as strong, studies have been done on the vitality of Yankunytjatjara in Coober Pedy (Naessan, 2008). There are suggestions that Yankunytjatjara is under pressure from Pitjantjatjara and Standard Australian English (SAE). Gale (2011) discusses Yankunytjatjara as being taken over by Pitjantjatjara; recently steps are also being made to revitalise a related moribund language, Ngarrindjeri, through teaching.

3 Description of the Role and Reference Grammar (RRG) paradigm

This section will outline RRG so that we can see how it will assist in analysing serial verb constructions. This will involve a discussion of elements at all levels of the sentence, clause, core (arguments) and nucleus (predicate); and a look at how operators work on these elements. The choice of RRG is motivated by its universality; its emphasis on communication; and by the fact that it can be used to look at semantic structure in particular the behaviour of predicates. The universality means we can study non Indo-European languages, of which Western Desert is one, on a neutral basis. By the analysis of predicate and argument structures we have the foundation for an in depth look at serial and multi verb constructions and how arguments are shared; this will also entail an analysis of juncture and nexus types. The constituent and operator projections will be discussed; how the data can be broken down and lexically decomposed showing the macrorole arguments.

3.1 Role and Reference Grammar

Role and Reference Grammar (RRG) is a structural-functional theory of grammar that represents syntactic structure through the meaning and function of words (Pavey, 2010:53). Thus it combines a semantic and communicative approach (Nolan, 2012:2ff). Similar semantic categories are to be found in all languages; but they are expressed differently syntactically. By linking syntax to semantics, a neutral environment is achieved that can be used for the study of any language. It is emphasised that RRG only includes features in clauses that have universal validity (Van Valin, 2001:205). The goal of RRG is a description and explanation of linguistic phenomena and an understanding of the cognitive basis of language (Van Valin & LaPolla, 1997:2-4). RRG is a minimalist grammar and is monostratal (Van Valin, 2007; Van Valin & LaPolla, 1997:21).

3.2 Representation of clauses

Van Valin & LaPolla (1997:25) posit these universal distinctions:

- Predicating versus non predicating elements.
- Noun phrases and adpositional phrases that are arguments of the predicate versus those that are not arguments.

Every language makes a distinction between predicates and arguments, regardless of lexical classes. There may be structures without a predicate and argument, for example in Lakota, *magázu* 'it is raining'; but the majority of clause patterns show predicate and argument (Van Valin & LaPolla, 1997:27).

The basic semantic categories of the clause are predicates, arguments and non-arguments (Pavey, 2010:53). The syntactic units are the nucleus, core and periphery. The nucleus contains the predicate (Van Valin, 2001:206); the core contains the nucleus and the arguments of the predicate; the periphery contains the non-arguments, adjunct modifiers of the core (Van Valin, 2007). These three are universal features of clauses, shown in every language (Aikhenvald, 2009). This is known as the layered structure of the clause (LSC); each layer is semantically motivated (Nolan, 2012:5). This is shown in figure 3:

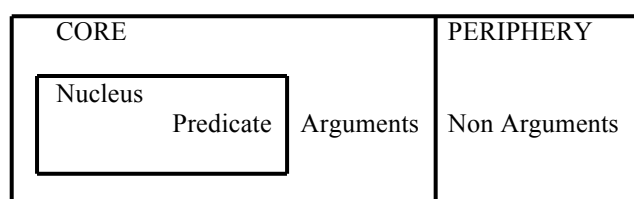


Figure 16: Layered structure of the clause (LSC)

The predicate tells us what is going on in a clause and is very often a verb. The nucleus may also contain a copula or auxiliary if there is a non-verbal predicate (Pavey, 2004), or it can contain a verb and noun stem (Van Valin & LaPolla, 1997:28).

A typical example with a verbal predicate is in figure 4:

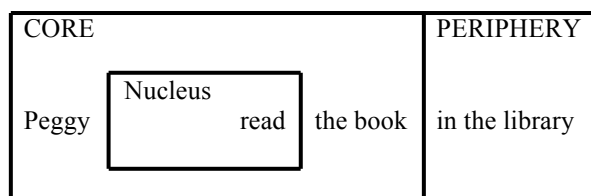


Figure 17: Example of LSC in English with verbal predicate

Noun and verb are posited as universally valid categories, based on reference (nouns); and predication (verbs) (Van Valin & LaPolla, 1997:28).

As well as these universal features, others occur. Outside the core but inside the clause, there may be pre and post core slots. Outside the clause but inside the sentence, left and right detached positions may also exist (Pavey, 2004; Van Valin & LaPolla, 1997:35-36).

The following is an example of a pre-core slot (PrCS):

- (1) *That book* you put on the table
*that book you put it on the table

No pronoun is needed if *that book* is in the PrCS.

This is a left detached position (LDP):

- (2) *That book*, you put it on the table:

This is grammatical if *that book* is in the LDP. If the noun phrase (NP) is a semantic argument, a referring pronoun ‘it’ is needed in the clause (Van Valin & LaPolla, 1997:35-36).

The pre-core slot may contain question words in English, or fronted elements such as ‘bean soup I can’t stand’ (Van Valin, 2005:5-7). If, for example, there is new information that needs focus, it needs to be within the clause and thus in the pre-core slot to be within the illocutionary force operator. The detached phrase is usually on the left. Adverbials often occur here, and are separated from the clause by a pause. When an element functions as a semantic argument, a pronoun is required in the core referring to it, as in the above example (ibid.)

A ‘core argument’ is a syntactic, rather than a semantic notion. For an element to appear in the core of a clause, there must be an argument in the semantic representation, but the opposite is not true; an argument in the semantic representation can occur in an extra core slot or detached position, as we saw in (1) and (2) (Van Valin & LaPolla, 1997:38). The universal elements (nucleus, core, periphery and clause) are semantically motivated, while the non-universal ones (detached phrases, core slots) are not semantically motivated but pragmatically motivated (Van Valin & LaPolla, 1997:39). In the clause, the head is the predicate and the dependents are arguments. Arguments do not have to be independent words: head marking is achieved via affixes on the predicate; these affixes are the arguments and the coreferential noun phrases are optional. Dependent marking is achieved by case or adpositional marking (Pavey, 2010:79).

The head marking language Lakhota has pronominal affixes on the verb as the core arguments, rather than independent phrases as in dependent marking languages. The opposition between dependent marking and head marking is not absolute; there are some dependent marking languages with head marking features and vice versa. Italian, Spanish, Polish and Croatian are basically dependent making languages, but have verb agreement which expresses person and number of the subject, meaning no independent pronoun is necessary (Van Valin & LaPolla, 1997:33-34). Pitjantjatjara and Yankunytjatjara have an alternative system of pronominal enclitics (Goddard, 1993:21) which act as arguments. However they are clitics of the first element of the clause rather than head marking.

The sentence constituents are represented in tree diagrams as in the figures below.

3.3 Operators

As well as the predicate, its arguments and the periphery, clauses may contain operators. These act to modify different parts of the clause. There are several types. Negation and illocutionary force are the only universal ones; negation is the only one that can act on all three levels of clause, core and nucleus. Operators are a closed class of grammatical categories (Pavey, 2010:62ff). The following are the kinds of operator and the level they modify:

- Nuclear: aspect/negation/directionals
- Core: event quantification/modality(deontic)/negation(internal)
- Clause: status/tense/evidentials/illocutionary force/negation(external)

The general schema in figure 5 after Nolan (2012:9) shows how the constituent representation ties in with the operator representation.

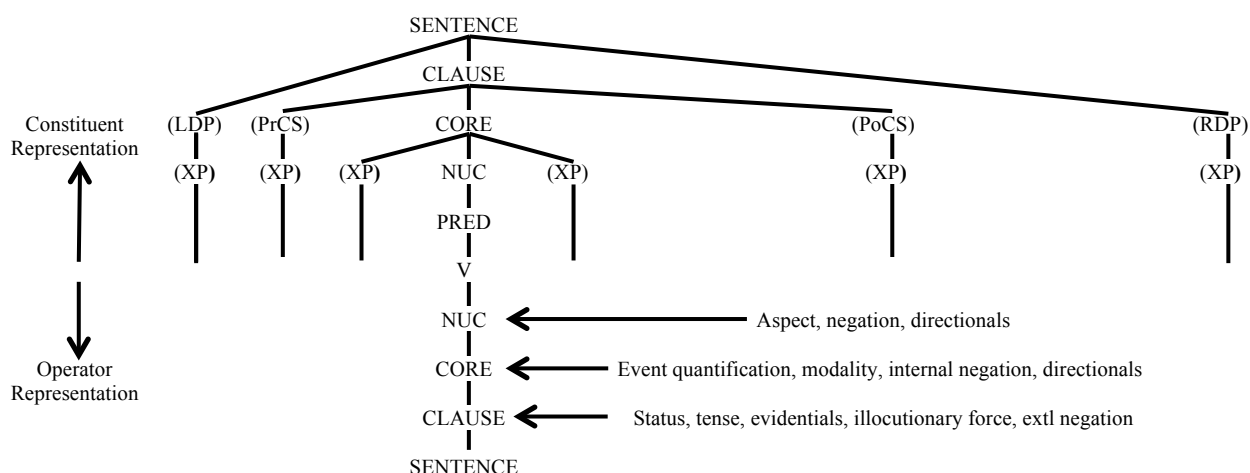


Figure 18: Constituent and operator representations

In the example in figure 6, ‘did’ is a clause operator with both illocutionary force (IF) and tense (Van Valin, 2001:207). The position of the tense operator signals IF in English (Nolan, 2012:8). The core medial shows declarative IF, core initial interrogative IF, and its absence shows the imperative. In the LSC, the syntactic categories at the bottom realise the units. The arrow of the periphery shows it is an adjunct, optional modifier of the core (Van Valin & LaPolla, 1997:31). There is a distinction between direct core arguments and oblique core arguments (Van Valin & LaPolla, 1997:29). Languages have different ways of showing this distinction, often by case or adpositional marking. The English example in figure 6, based on Nolan (2012:9), has prepositional marking.

‘What’ in an example like this is a non-core direct argument, rather than an adjunct. ‘What’, ‘Joe’ and ‘Mary’ are syntactic and semantic arguments. ‘Joe’ and ‘Mary’ are core arguments. We could have oblique arguments in the pre-core slot too, for example, ‘To whom did John show the book’ (Van Valin & LaPolla, 1997:38). The term ‘reference phrase’ is often used instead of ‘noun phrase’ in recent work (Nolan, 2012:9).

The LSC allows representation of free order and head marking languages as well (Van Valin & LaPolla, 1997:33). The projections can deal with any word orders- lines can cross as in the constituent example in figure 7 from Pavey (2010:56-57); the data is from Jiwari (Pama-Nyungan, Australia).

semantics' (Van Valin & LaPolla, 1997:68). Functional (or 'operator') elements such as determiners have a separate projection and cannot therefore appear as heads of phrases.

There are five basic predicate classes of events or states, with a basic distinction between static and non-static: 'State', 'Activity', 'Achievement', 'Semelfactive' and 'Accomplishment' (Pavey, 2010:94). To these can be added 'Active achievement (ibid.)'/'Active accomplishment' (Nolan, 2012). These are based on Aktionsarten and have good cross linguistic validity.

The basic two classes are state and activity (Pavey, 2010:97). The other classes build on these, using predicate modifiers in the logical structure (Chang, 2007). We place the predicate in bold with a quote (Pavey, 2010:108) to show the logical structure (LS) (Van Valin, 2007) and arguments in brackets afterwards. These predicates are not intended to represent words in any language but rather semantic metalanguage (Chang, 2007). Abstract predicates cannot have more than two arguments, so three argument verbs need more complex constructions (Van Valin, 2007). The following is based on Nolan (2012:11,33ff), Pavey (2010:109ff), Van Valin (2001:210-211) and Van Valin (2007).

3.4.1 State

These involve feelings, conditions and properties. The LS is **predicate'**(x) or **predicate'**(x, y).

The following are examples of stative predicates.

- (3) **cold'**(ice-cream) 'the ice-cream is cold'
- (4) **be'**(Marie, [**clever'**]) 'Marie is clever'
- (5) **be-in'**(park, pond) 'the pond is in the park'

3.4.2 Activity

These involve action. The LS is **do'**(x, [**predicate'**(x)]) or **do'**(x, [**predicate'**(x, y)]).

In (6) and (7) there are examples of activity predicates.

- (6) **do'**(Peadar, [**run'**(Peadar)]) 'Peadar is running'
- (7) **do'**(Lara, [**compose'**(Lara, symphony)]) 'Lara is composing a symphony'

do' is a part of the logical structure of all activity predicates; [**do'** (x, Ø)] is an unspecified activity (Van Valin, 2007).

3.4.3 Achievement

Achievement is an instantaneous change of state. In the logical structure INGR is added to a state or activity.

- (8) INGR **exploded'** (lightbulb)
'the lightbulb exploded'

3.4.4 Accomplishment

Accomplishment is a change of state that takes time and has an inherent endpoint. This is shown by adding BECOME to a state or activity.

- (9) BECOME **melted**' (candle)
'the candle melted'

3.4.5 Semelfactive

Semelfactive is instantaneous with no change of state. This is shown by adding SEML to a state or activity.

- (10) SEML **see**'(John, answer)
'John glimpsed the answer'

3.4.6 Active achievement/accomplishment

Active achievement/accomplishment (Nolan, 2012:11) is an activity with an endpoint added. This thus combines meanings.

- (11) [**do**'(Henry,[**walk**'(Henry)))] & [INGR **be-at**'(park,Henry)]
'Henry walked to the park'

3.4.7 Summary

The predicate classes and their properties are summarised in table 1.

Table 2: Predicate classes

	Static	Dynamic	Endpoint	Instantaneous	Change of State
State	yes	no	no	no	no
Activity	no	yes	no	no	no
Achievement	no	no	yes	yes	yes
Accomplishment	no	no	yes	no	yes
Semelfactive	no	some	no	yes	no
Active achievement/ accomplishment	no	yes	yes	no	no

3.5 Causation

Each of these has a corresponding caused event or state (Pavey, 2010:101-102). This takes the form of A CAUSE β where A and β are logical structures of any type (Van Valin, 2007). CAUSE signals a causative relation between two predicates. Pavey (2010:115) gives the following example:

- (12) [**do**'(Bob, \emptyset)] CAUSE [BECOME **dead**'(postman)]
'Bob killed the postman'

The DO agentive builds on this (Pavey, 2010:115):

- (13) [DO (Bob, [**do**'(Bob, \emptyset)] CAUSE [BECOME **dead**'(postman)])]
'Bob murdered the postman'

In ditransitive constructions traditionally there are a subject, object and indirect object; but semantic representations in RRG only take two arguments. These need to be paraphrased, for example:

(14) [**do'** (x, Ø)] CAUSE [BECOME/INGR **predicate'** (y,z)]

In the LS, **predicate'** could be **have'**, **be-LOC'** or **exist'**.

So 'give' is lexically decomposed as follows, where x is the actor, z the theme and y the recipient (Nolan, 2012:42-44):

(15) [**do'** (x, Ø)] CAUSE [BECOME **have'** (y,z)]

For example an action of giving could be decomposed as:

(16) [**do'** (Sue, Ø)] CAUSE [BECOME **have'** (George,book)]
'Sue gave George the book'

3.6 Semantic macroroles

Sentences contain predicate arguments with roles traditionally described as the instrument, theme, patient and many others. These can be bulked up or generalised to two semantic macroroles. These macroroles draw a distinction between generally agentive 'doers' and those that are 'affected' by the action (Pavey, 2010:118-119; Van Valin & LaPolla, 1997:140). The actor and undergoer as these macroroles are termed, are not synonymous with the syntactic subject/object (Van Valin, 2007). So the actor can be the subject of an active voice transitive verb or the object of 'by' in a passive construction. The undergoer is the direct object of an active voice transitive verb and the subject of a passive verb (Van Valin, 2001:30). In English, either the actor or the undergoer may be the subject. English allows many argument types to be actor or undergoer; but some languages are stricter, for example only allowing animate or quasi animate entities as actor (Van Valin & LaPolla, 1997:142-143).

Arguments in the logical structures are mapped onto the macroroles (Pavey, 2004). Generally the 'x' in a two argument construction is the more actor like. Transitivity in RRG is expressed in terms of the number of semantic macroroles a verb takes. An intransitive verb takes one macrorole (actor or undergoer). A transitive one takes two, an actor and an undergoer. A ditransitive has both macroroles and a 3rd argument, the non macrorole direct core argument (Van Valin, 2007). Atransitive verbs have no macroroles, for example snow'. Irregular verbs have rules that are stored in the verb's lexical entry (Van Valin, 2001:211). These may have syntactic arguments but a different number of macrorole arguments. M-transitivity is the number of semantic macroroles a predicate takes; S-transitivity is the number of syntactic arguments (Nolan, 2012:13).

There is an actor undergoer hierarchy, with the most actor like being the role decomposed as DO, involving a conscious wilful agent. At the other end of the spectrum, a patient would be more a more marked choice as an actor (Pavey, 2010:120). This can be summarised as in figure 8 (Pavey, 2010:118-120):

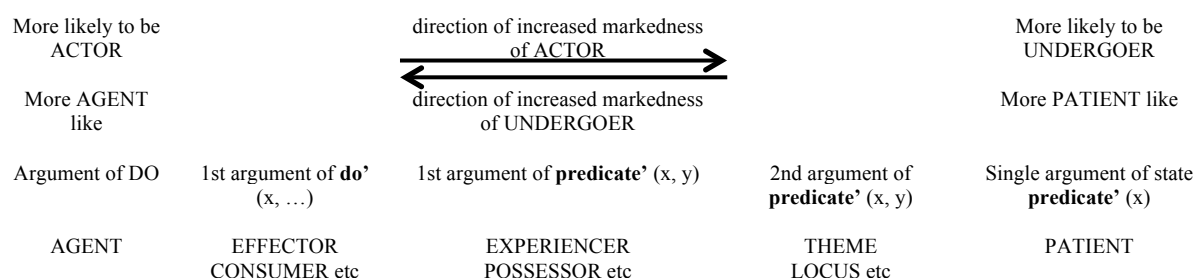


Figure 21: Actor undergoer hierarchy

In head marking, the order of affixes on the root gives the information, rather than the order of the words or case. So for example the actor argument can be expressed as a proclitic, and undergoer and third argument as enclitics (Pavey, 2010:138).

Having identified the macroroles, we can use them to identify the unmarked word order in languages, thus English, often called an SVO language has the order ACTOR PREDICATE UNDERGOER (Pavey, 2010:137ff).

Not all arguments in a logical structure representation are macroroles. For example a locative state predicate such as *be-on'* only has one macrorole, the undergoer; 'pigeon' in this example (Pavey, 2010:124):

- (17) The pigeon is on the table
be-on' (table, pigeon)

3.7 Linking algorithm

The grammatical procedures in a language use a linking algorithm from the syntactic representation to the semantic representation and back (Van Valin, 2001:209). There is a single level of syntactic representation, mapped directly to the semantic representation (Van Valin & LaPolla, 1997:21). The syntactic inventory refers to the set of templates that can be combined (Van Valin, 2005:15). This is shown in figure 9:

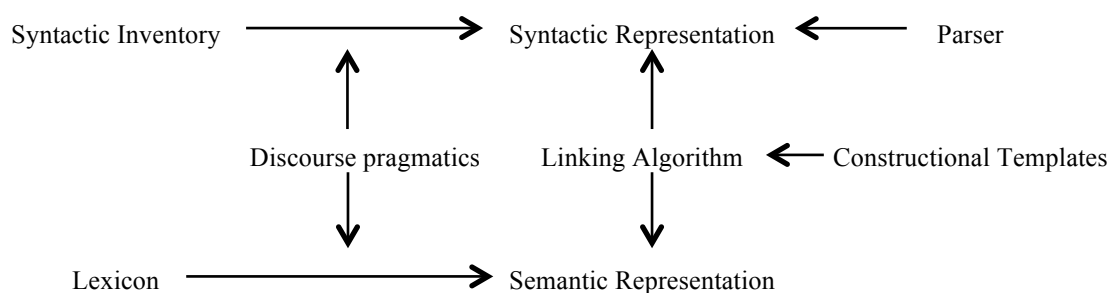


Figure 22: Linking algorithm

Semantics is linked to syntax for the speaker's perspective and syntax to semantics for the addressee's process (Pavey, 2010:298). In this way meaning is conveyed from speaker to listener via syntax. The semantic representation takes into account the lexicon, in other words the meanings of the predicates, and not just the effect of operators on predicates (Pavey,

2010:93-94). Multiple levels of syntactic representation are not necessary (Van Valin & LaPolla, 1997:21). There is a single level from the syntactic representation via the linking algorithm to the semantic representation.

The constituents are shown as sentence, clause, core, predicate and arguments; the semantic representation shows the event. The actor-undergoer hierarchy is the main interface between the syntactic and semantic representations, and allows mapping between them (Pavey, 2004).

For example in French, a causative example in figure 10 shows how the constituent representation ties into the semantic representation, based on Nolan (2012:17).

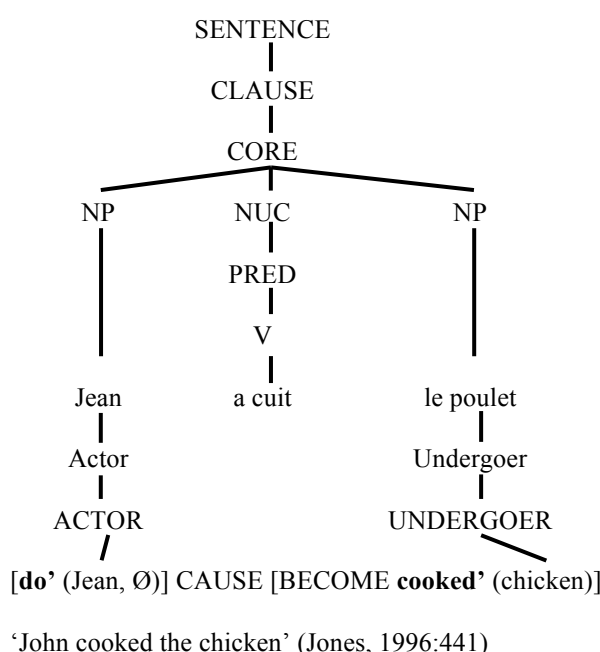


Figure 23: Representation of causative

The logical structure of this causative contains **do'**, CAUSE and BECOME, involving action, causation and accomplishment. The chicken as the undergoer is the single argument of the state predicate **cooked'**.

In this case, the causative may add to the number of macrorole core arguments, semantic arguments and independent syntactic core arguments (Pavey, 2010:169). A semantic and a syntactic argument are added to a non-causative predicate by the expression of the causer argument, which has actor macrorole status (Pavey, 2010:162-164). This changes both the meaning and the morpho-syntactic form of the sentence. The semantic valence is increased by adding the causer; the grammatical valence increases if another argument is added (Payne, 2006:258).

The completeness constraint states that the semantic and syntactic elements must be accounted for and match (Van Valin, 2007). All arguments in the semantic representation must be realised in the syntax and all referring expressions in the syntax must be linked to something in the semantic representation. Semantic roles as opposed to grammatical relations are claimed to be universal (Nolan, 2012:14-15).

3.8 Privileged Syntactic Argument

Subject and object are not considered universal (Pavey, 2004). Instead the Privileged Syntactic Argument (PSA) is used in RRG. Nolan (2012:14) calls this the restricted neutralisation of semantic roles and pragmatic functions for syntactic purposes. Pavey (2010:143) says this means that either the actor or undergoer can be the PSA, but that it is restricted to macroroles. This is termed the syntactic PSA.

Pavey (2010:143) states that the PSA controls verb agreement. The PSA may be the actor of a transitive predicate; the actor or undergoer of a single argument or intransitive predicate; or the undergoer in a passive construction. This last occurs in English and Irish (Nolan, 2012:14). However some languages do allow non-macrorole direct core arguments to be the PSA (Van Valin, 2007). Unlike semantic macrorole selection which is universal, PSA selection is language specific (ibid.).

The PSA selection hierarchy is similar to the actor/undergoer one; in accusative languages the most actor like is the PSA; in ergative languages (such as is Western Desert (Goddard, 1993:8)) the most undergoer like one fulfils this and is in absolutive case (Van Valin, 2007). In the ergative pattern, single arguments of intransitive verbs pattern like undergoers of transitive verbs (Pavey, 2010:150-152).

3.9 Juncture

Complex sentences may have a core with two nuclei, a clause with two cores or a sentence with two clauses. Sentences with more than one clause, core and/or nucleus have different kinds and levels of connection between the units, known as juncture (Pavey, 2010:219-220).

- Clause level- independent clauses with their own arguments, e.g. ‘Gary bought some puppies and he gave them to Jake’
- Core level- cores sharing an argument, e.g. ‘Jake told Gary to leave the room’
- Nuclear- juncture has one set of arguments, e.g. ‘Jake forced open the door’

This can be summarised as:

- [CORE...[NUC PRED]... + ... [NUC PRED]...] nuclear juncture
- [CLAUSE...[CORE ...]... + ... [CORE ...]...] core juncture
- [SENTENCE...[CLAUSE ...]... + ... [CLAUSE ...]...] clausal juncture

The unmarked linkage paradigm has units of the same level being linked. Marked, asymmetric linkages may occur for example between clause and core (Van Valin & LaPolla, 1997:442).

These can be joined by the following nexus types:

- Coordination- two or more units of the same type, joined symmetrically.
- Subordination- one unit is embedded in another. The subordinate clause is structurally dependent on the main clause. The sub clause is usually finite, marked for tense and agreement, expressing an event within another event.
- Cosubordination- two or more units are symmetrically joined, but one is dependent on another through the operator (Pavey, 2010:223-225).

There is a linear order of operator morphemes (Pavey, 2010:77), with the clausal furthest from nucleus. The clausal has scope over the core and nucleus. In P/Y we see the verb endings combine tense and IF at the clause level and aspect at the nuclear level. The inchoative ending *-ri* is appended before the verb endings.

In coordinated clauses, none are dependent and they are in sequence, with or without coordinating conjunctions. In subordinated ones the main clause is ‘modified’ by one or more subordinate clauses (nominal, adjectival, adverbial, temporal, conditional or relative) (Van Valin & LaPolla, 1997:441). Clausal coordination with core and nuclear junctures are shown in figure 11 from Van Valin & LaPolla (1997:464).

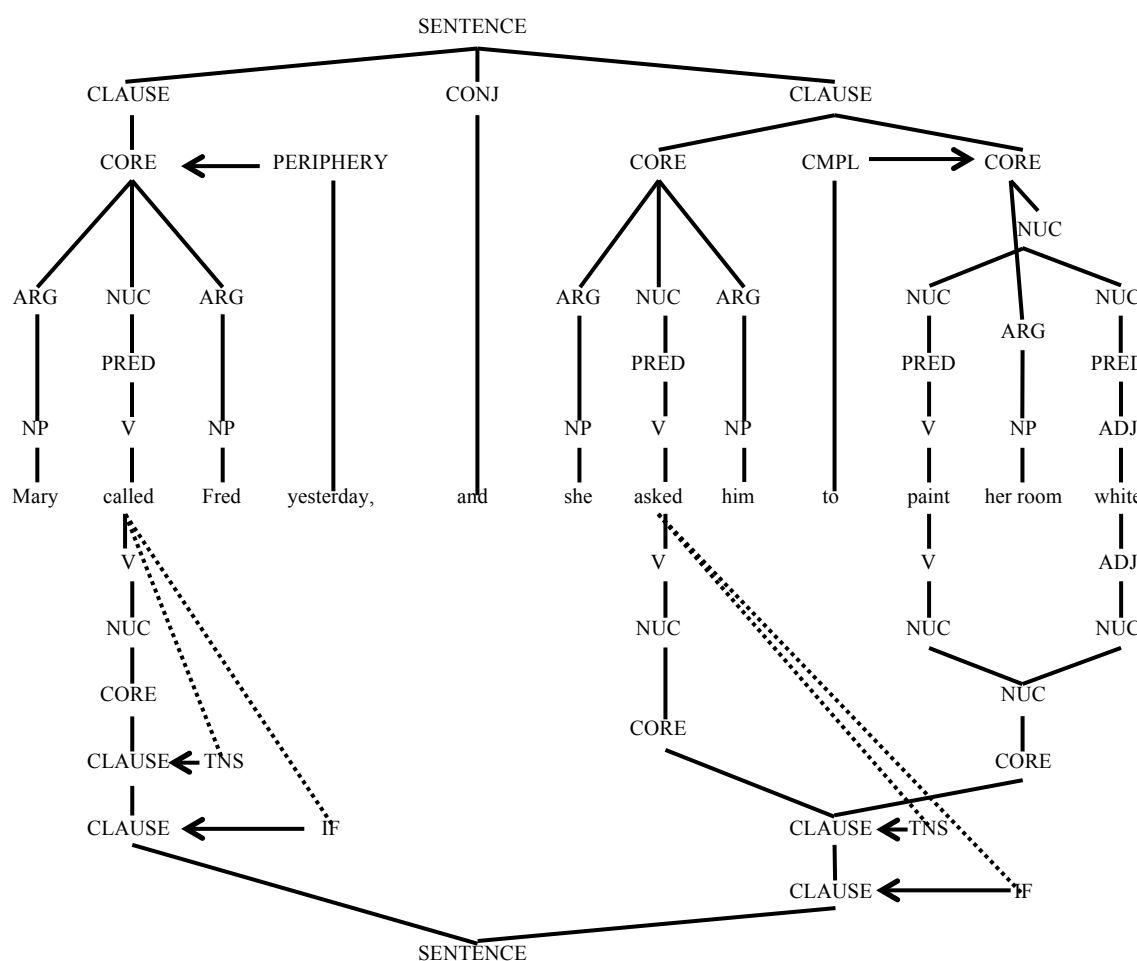


Figure 24: Clausal, core and nuclear juncture

Thus the juncture-nexus combinations give us nine types (Pavey, 2010:227). Most languages do not have all nine (Van Valin & LaPolla, 1997:455); English has seven, lacking nuclear coordination and subordination. We look at some examples in the following sections.

3.9.1 Clause cosubordination

Two clauses are joined; but an operator has scope over both. In this example declarative illocutionary force and past tense are shared by both clauses:

(18) ‘Paul drove to the store and bought some beer’ (Van Valin & LaPolla, 1997:455)

3.9.2 Core coordination

The deontic modality operator *must* has scope only over ‘tell Bill’ so the two cores are coordinate (Pavey, 2010:225). ‘Tom’ is the subject only of ‘tell’.

(19) ‘Tom must tell Bill to open the door’

The constituent structure of core coordination is shown in figure 12 (Van Valin, 2005:188-189).

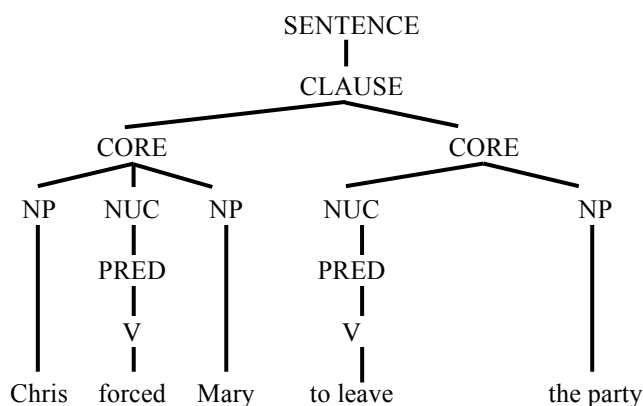


Figure 25: Core coordination

3.9.3 Core subordination

The subordinate clause may modify the core with respect to time, space or manner. Alternatively the core or clause functions as a core argument of the main predicate (Pavey, 2010:230-231).

(20) ‘The snow fell after I washed my car.’

(21) ‘That Shane won the competition surprised everybody.’

The example in (21) may be lexically decomposed as a causative, with the subordinate ‘that Shane won the competition’ being the x argument. The dependent unit can have its own operators.

(22) **do**’(x,0) CAUSE INGR **feel**’(everybody, surprise)

The clause can be a subject: *that it is raining* comes as no surprise. Or an object: Max regretted *that he had insulted Susan* (Van Valin & LaPolla, 1997:442). In these cases, the clauses act as core arguments which show subordination at core level (Van Valin, 2005:189). Some languages have nominalised constructions, e.g. Fijian (Pavey, 2010:231), and as discussed below, P/Y.

3.9.4 Core cosubordination

The deontic modality operator *must* has scope over both cores (Pavey, 2010:225) so is an example of cosubordinate nexus. ‘Tom’ is shared as subject by both cores.

‘Tom must try to open the door’

3.9.5 Nuclear cosubordination

Aspect is a nuclear operator and in this example progressive aspect marker *-ing* has scope over both nuclei (push and open) so is a case of nuclear cosubordination (Pavey, 2010:234).

(23) ‘Kerry is pushing open the door’

The constituent structure of nuclear cosubordination is shown in a French causative in figure 13 (Van Valin, 2005:191):

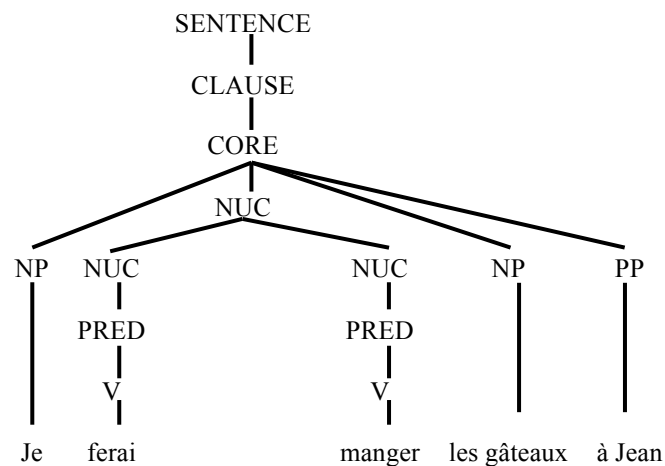


Figure 26: French example of nuclear juncture

As a general rule, the causative suggests the events described by two predicates are strongly interconnected. These have a more tightly connected syntactic structure, of which nuclear cosubordination is the strongest. Simple sequential actions have the weakest and loosest connections; clausal coordination lies at the loose end of this extremity (Pavey, 2010:245).

3.10 Summary and further constructions

We have looked at the three levels of juncture and three types of nexus. The link between nexus juncture and actions is shown in figure 14, drawn from Van Valin & LaPolla (1997:480-481). This will be of importance when we discuss multiple verb constructs.

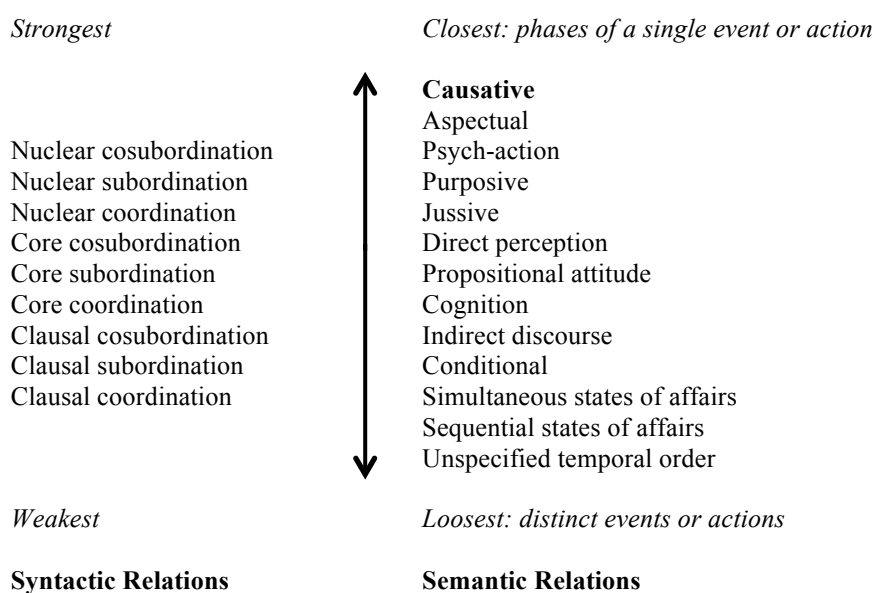


Figure 27: Syntactic and semantic relations

Serial verb constructions (SVC) may be core or nuclear junctures (Pavey, 2010:236). An SVC is a sequence of verbs that act as single predicate, with no marker of coordination, subordination or syntactic dependency of any sort and conceptualised as a single event. They are monoclausal; the intonation is the same as monoverbal, with one tense and aspect. There may be sharing of core and other arguments. Each component must be able to occur on own. Individual verbs may have same or different transitivity values (Aikhenvald, 2006:1). Multi verb including serial verbs constructions occur in Pitjantjatjara and Yankunytjatjara (Goddard, 1993:25-26) so we will look at how the arguments are shared and what levels of nexus occur.

4 The nominal system in P/Y

In Pitjantjatjara, nouns and adjectives have similar endings and along with demonstratives can head a noun phrase (NP), so they are together classed as nominals (Bowe, 1990:4). The shared endings include inflections and derivational suffixes (Dixon, 2011:272).

There is a general distinction in languages between head marking which occurs on the predicate, and dependent marking which is achieved through the use of cases (Pavey, 2010: 79-81). In head marking, the affix on the verb represents the argument of the predicate, with coreferential noun phrases being optional. The rich set of case marking in P/Y indicates dependent marking.

While case marking can lead to freedom in word order (Pavey, 2010:316), sentences in Pitjantjatjara have a basic SOV order (Bowe, 1990:viii). Furthermore there is a constraint on the ordering of elements within the noun phrase. As we will see there is also a system of

enclitics that can represent predicate arguments, so we will look at whether this represents limited head marking.

Dixon (2011:294) groups case functions into core and peripheral. The core ones are case markings on the required nominal arguments for a predicate. The peripheral ones may be local, describing the location or movement of the action, or syntactic, adding further information such as the indirect object or goal. The cases for P/Y are shown in table 2. These functions represent the RRG elements in the layered structure of the clause; containing the core with the arguments and the periphery with non-arguments.

Table 3: P/Y case system

		Common	Proper
Core	ABSolutive (S, O)	-Ø (- <i>pa</i>)	- <i>nya</i>
	ERGative (A)	- <i>ngku</i> (- <i>tju</i> , - <i>tu</i>)	- <i>lu</i>
	VOCative		-Ø
Local peripheral	LOCative	- <i>ngka</i> (- <i>tja</i> , - <i>ta</i>)	- <i>la</i>
	ALLative	PURP + - <i>tu</i>	LOC + PURP+ - <i>tu</i>
	ABLative	- <i>nguru</i>	LOC + - <i>nguru</i>
	TRANSverse	- <i>wanu</i>	LOC + - <i>wanu</i>
Syntactic peripheral	DATive	LOC	
	PURPositive	- <i>ku</i>	
	CAUSal	- <i>tjara</i> , LOC, ABL	
	INSTRumental	LOC	
	AVERSive	LOC + - <i>tawara</i>	
	GENitive	PURP	

4.1 Nominals

Verbs are classed as transitive or intransitive depending on their argument structure which is lexically defined (Bowe, 1990:8). Transitive verbs have two participants; intransitive verbs have one. Bowe (1990:23) discusses Pitjantjatjara base form verbs in terms of their valency, in other words how many core arguments are required. Pavey (2010:123) notes that the syntactic, semantic and macrorole valences need not necessarily be the same: we will see examples where a semantic role can be in a syntactically peripheral case.

Three roles are identified in intransitive and transitive verbs: S- the single argument of an intransitive verb; A- subject of a transitive verb, with a semantic role of agent; O- the object of a transitive verb. Bowe (1990:14-15) discusses these as syntactic roles, but uses the term P for the object of a transitive verb.

Intransitive S has no special ending in P/Y, *papa* ‘dog’ in this example from Goddard (1993:8):

- (24) Papa nyina-nyi
 Dog-ABS sit-PRES
 ‘The dog is sitting.’

Semantically this is represented in this logical structure:

(25) **do'**(dog,[**sit'**(dog)])

The mapping from constituent projection to logical structure is shown in figure 15. *papa* is in absolutive case, which has no ending; this may also be marked as a –Ø ending.

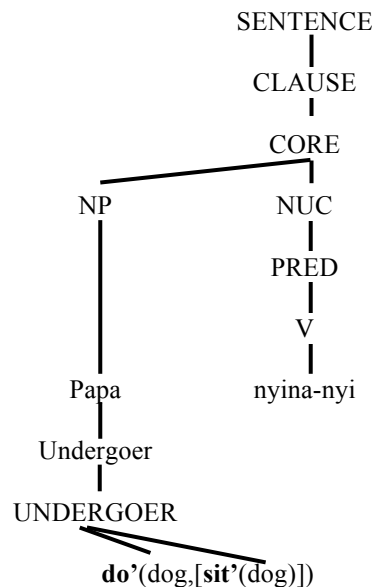


Figure 28: Intransitive verb, constituent projection mapping to logical structure

With a transitive verb, *papa* gets the ergative case if it is the doer of the action, or A. In this example *tjitji* ‘child’ is the undergoer, or object O, with absolutive case (Goddard, 1993:7):

(26) Tjitji papa-ngku patja-nu
 Child-ABS dog-ERG bite-PAST
 ‘The dog bit the child.’
do'(dog,[**bite'**(dog, child)])

This ties to the constituent projection as in figure 16; the order of arguments is determined by the case with ergative the first argument, the actor.

As we can see the word order can vary from the more rigid pattern in English. If the roles are reversed, the cases follow:

(27) Tjitji-ngku papa patja-nu
 Child-ERG dog-ABS bite-PAST
 ‘The child bit the dog.’

With states in P/Y no verb is required. In other words the predicate is non-verbal (Pavey, 2010:57). Goddard (1996:210) has this example:

(28) Kungka nyara paluru kunyu yunpanya kutu munu mangka walata alatjika.
 Woman that.one 3sg REP good.looker really and head.hair long absolutely
 ‘The woman in the story was stunning looking and had really long hair.’

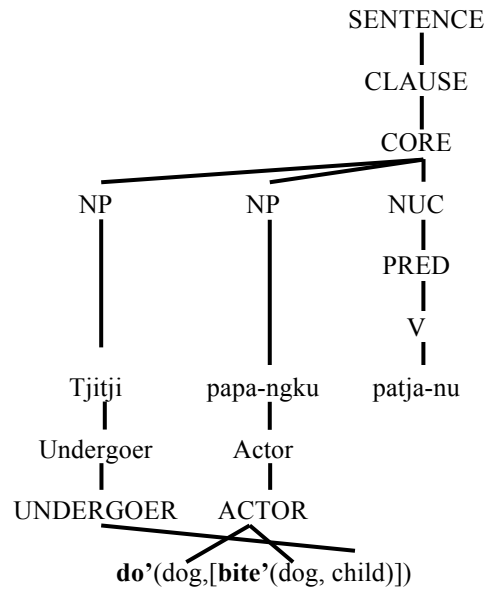


Figure 29: Transitive verb, constituent projection mapping to logical structure

Semantically this is stative, so the logical structure is **be'** (woman, [**good-looking'**]) and **have'** (woman, long.hair]). The noun *kungka* 'woman' is in the absolutive case. Such verbless clauses exist in all Australian languages (Dixon, 2002).

Verbless predicates occur for both non-volatile and volatile attributes. This example of a non-volatile attribute is from Goddard (1993:13):

- (29) papa nyangatja tjukutjuku
 dog this.one-ABS small
 'this dog is small'

This may be lexically decomposed as **be'** (papa,[**small'**]). Figure 17 shows the constituent projection with the predicate containing an adjective.

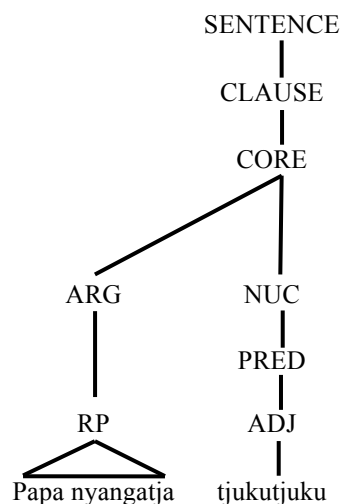


Figure 30: Verbless state predicate

Ninti Ngapartji (2009: lesson 3) has this example with a name, note the marking of the absolutive.

- (30) Ngayuku ini Matilda-nya
 1sgPOS name Matilda-ABS
 ‘My name is Matilda’

No verb is required for volatile attributes either (Goddard, 1996:121):

- (31) Ka-la nyina-ra ula-ngi, ‘Wala-ngku ngunytju mantji-la!
 And-1plNOM sit-SERIAL cry-PAST.CONT quickly-ERG mother get-IMP
 Ngayulu paltjatjiratja!’
 1sgNOM hungry
 ‘We used to sit there crying (as the food cooked) Quick Mum, get it out! I’m hungry!’

In the ergative pattern, single arguments of intransitive verbs pattern like undergoers of transitive verbs (Pavey, 2010:150-152). In P/Y, these get the absolutive case rather than determining verb agreement patterns. In this case, the Privileged Syntactic Argument is the undergoer *papa* in (27) and this patterns like the single argument *papa* in (24). As Myers (1978:13) puts it, every action has an undergoer. So a person being hit undergoes hitting, and a person sitting undergoes sitting. In this way the S and O roles would pattern together. As discussed in section 3.9, the PSA controls verb agreement (Pavey, 2010:143); however in P/Y there is no person, gender or number marked on the verb.

An attributive, demonstrative or quantifier can all function as the NP (Bowe, 1990:38); this example is a demonstrative:

- (32) Panya-ngku ngayu-nya nya-ngu
 DEF-ERG 1sgACC see-PAST
 ‘The one we have been talking about saw me.’

Verbs in Pitjantjatjara are generally either transitive or intransitive (Bowe, 1990:25-26). One exception is *inka* which can vary between transitive and intransitive. We can see in the logical structure how the arguments for the predicate can vary depending on the valency. The subject is marked absolutive or ergative as appropriate:

- (33) Tjitji kulunypa inka-nyi
 Child young-ABS play-PRES
 ‘The young child is playing around.’
do’(child, [play’(child)])
- (34) Minyma-ngku inma inka-nyi
 Woman-ERG song-ABS sing-PRES
 ‘The woman is singing a song.’
do’(woman, [sing’(woman, song)])

The ergative ending differs depending on whether the noun is a name for a person or place, or not (Goddard, 1993:14). A common noun has *-ngku* as ergative, as we have seen.

- (35) Wati-ngku ngintaka pu-ngu
 Man-ERG perentie.lizard-ABS hit-PAST
 ‘The man hit the perentie lizard.’

Names or proper nouns have different endings, *-lu* for ergative:

- (36) Tjani-lu ngintaka pu-ngu
 Johnny-ERG perentie.lizard-ABS hit-PAST
 ‘Johnny hit the perentie lizard.’

Words in Yankunytjatjara are allowed to end in a consonant whereas in Pitjantjatjara they are not; in the latter the suffix *-pa* is added to consonant stems as the stem must end in a vowel (Goddard, 1993:2). This can be regarded as an allomorph of the absolutive case (Dixon, 2011:492).

Thus P/Y is one of the several varieties of Western Desert that are reported as having suffixes marking the intransitive subject as well as the direct object with personal names and consonant stems (Blake, 1987:30). Interestingly another Western Desert dialect, Ngaanyatjara from the neighbouring Warbarton ranges has *-lu* as the ergative marker for common nouns as well as personal names (Douglas, 1958:17) so does not distinguish.

A ditransitive verb such as *u* ‘to give’ can have two objects, both in absolutive case (Bowe, 1990:24):

- (37) Minyma-ngku tjitji mai u-ngu
 Woman-ERG child-ABS bread-ABS give-PAST
 ‘The woman gave the child some bread.’

As in the logical structure a predicate can only have a maximum of two arguments, this has a causative connotation: [**do**] (woman, Ø) CAUSE [BECOME **have**] (child, bread)]

Bowe (1990:25) in discussing the verb *wangka* ‘to tell’, says there are two structures that can be used. Both the beneficiary and the patient can in the absolutive case, with the obligatory direct object or patient being closest to the verb:

- (38) Minyma-ngku tjitji tjukurpa wangka-ngu
 Woman-ERG child-ABS story-ABS tell-PAST
 ‘The woman told the child a story.’

Alternatively, the indirect object or addressee can get the locative case:

- (39) Minyma-ngku tjitji-ngka tjukurpa wangka-ngu
 Woman-ERG child-LOC story-ABS tell-PAST
 ‘The woman told the child a story.’

The case can also be used with verbs of emotion (Bowe, 1990:16). So what may appear as a transitive verb semantically is syntactically intransitive; the sole predicate argument *kulunypa* ‘toddler’ is thus in the absolutive:

- (40) Kuluny-pa ngampu-ku mukuri-nganyi
 Toddler-ABS egg-PURP like-PRES
 ‘The toddler likes eggs.’

This construction is known as the antipassive (Blake, 1987:57-58), which is found in several Australian languages. The sentence becomes intransitive by the A becoming S and the O becoming an oblique case, here the purposive, being a complement. This produces a sentence with lower semantic transitivity, and changes its PSA (Pavey, 2010:160-161).

4.2 Pronouns

Pitjantjatjara has free and bound pronouns (Blake, 1987:183-4). Pronouns have a nominative/accusative system (Bowe, 1990:8) and singular, dual and plural number (Bowe, 1990:11):

- (41) Ngayu-lu tjitji nya-ngu
 1sg-NOM child-ABS see-PAST
 ‘I saw the child.’
- (42) Ngayu-lu a-nu
 1sg-NOM go-PAST
 ‘I went.’
- (43) Tjitji-ngku ngayu-nya nya-ngu
 Child-ERG 1sg-ACC see-PAST
 ‘The child saw me.’

Most Western Desert dialects have bound pronouns that occur following the first constituent in the clause (Blake, 1987:103), rather than attached to the verb. They share this feature with a small number of other Pama-Nyungan languages. The bound pronouns in Pitjantjatjara are short forms that are not separate words but attach themselves to the last word of the first phrase in a sentence or to a connective word such as *ka* ‘and, but’ and *munu* ‘and’ (Ninti Ngapartji, 2009: lesson 7). For example, the pronoun *ngayulu* ‘I’ has the short form equivalent *-na*.

- (44) Ngayulu a-nu
 1sgNOM leave-PAST
 ‘I left.’
- (45) A-nu-na
 Leave-PAST-1sgNOM
 ‘I left’.

In this example, note there is no requirement for a verb, similar to examples (28) and (29):

(46) Nyuntu kura
2sgNOM bad
'You're bad.'

(47) Kura-n
Bad-2sgNOM
'You're bad.'

As these bound pronouns attach to any class of word they are clitics rather than suffixes according to (Pavey, 2010:37). Verbs with clitic pronominals are discussed further in Dixon (2011:362) with an example from Western Desert:

(48) Pu-ngku-rna-nta
Hit-FUT-1sgNOM-2sgACC
'I will hit you.'

As clitics, these pronominals are appended after case suffixes (Ninti Ngapartji, 2009: lesson 12).

(49) Tjawa-kutu-na a-nanyi
Shop-towards-1sgNOM go-PRES
'I'm going to the shop.'

The order of pronominal clitics is subject preceding object:

(50) Putu-na-nta alti-ngu
Cannot-1sgNOM-2sgACC call-PAST
'I couldn't call you.'

These are summed up in table 3, based on Ninti Ngapartji (2009: lesson 12).

Table 4: Full and enclitic pronouns

Singular	Subject		Object	
1 st Person	<i>ngayulu</i> (I)	<i>-na</i>	<i>ngayunya</i> (me)	<i>-ni</i>
2 nd Person	<i>nyuntu</i> (you)	<i>-n</i>	<i>nyuntunya</i> (you)	<i>-nta</i>
3 rd Person	<i>paluru</i> (he/she/it)	<i>-0</i>	<i>palunya</i> (him/her/it)	<i>-0</i>
Dual				
1 st Person	<i>ngali</i> (we two)	<i>-li</i>	<i>ngalinya</i> (us two)	<i>-linya</i>
2 nd Person	<i>nyupali</i> (you two)	<i>pula</i>	<i>nyupalinya</i> (you two)	<i>-0</i>
3 rd Person	<i>pula</i> (those two)	<i>pula</i>	<i>pulanya</i> (those two)	<i>-0</i>
Plural				
1 st Person	<i>nganana</i> (we)	<i>-la</i>	<i>nganananya</i> (us)	<i>-lanya</i>
2 nd Person	<i>nyura</i> (you all)	<i>-ya</i>	<i>nyuranya</i> (you all)	<i>-0</i>
3 rd Person	<i>tjana</i> (they)	<i>-ya</i>	<i>tjananya</i> (them)	<i>-0</i>

In terms of core relations, this three way nominative/ergative/accusative case distinction and presence of subject/object cross referencing bound pronouns is common in Australia (Blake,

1987:23-24). Arguments in simple sentences can be represented by nominal, pronouns, pronominal clitics (Bowe, 1990:24). If there is no NP representing an obligatory argument, the 3rd person pronominal is implied (Bowe, 1990:13).

Bowe (1990:11-12) has these examples in terms of the agent/patient; the absolutive and ergative cases may receive further clitics:

(51) Tjitji-na nya-ngu
Child-ABS-1sgNOM see-PAST
'I saw the child.'

(52) Tjitji-ngku-ni nya-ngu
Child-ERG-1sgACC see-PAST
'The child saw me.'

A subordinate clause can be marked with the clitic too. It gets the ergative case making first as it relates to a transitive verb in the main clause:

(53) Paluru ngalya pitja-ntjatjanu-ngku-ni mai u -ngu
3sgNOM back come-ANT(SS)-ERG-1sgACC food give-PAST
'When she came back, she gave me some food.'

4.3 Discussion

There is split ergative/nominative system for nouns and pronouns. Furthermore there is a distinction in certain case markers for nouns and proper nouns in many grammatical cases.

The existence of a nominative/accusative system has been related to animacy, control and the propensity to be the topic of a clause: these all have a tendency to be nominative (Blake, 1987:21). Pronouns fulfil these criteria. Common nouns are more likely to carry special marking when they are the subject of a transitive verb than are proper nouns or pronouns (Bowe, 1990:15). In the case of Pitjantjatjara, proper nouns are grouped with common nouns rather than pronouns in getting the ergative marking.

There is a hierarchy of pronouns and nominal likelihood to be nominative/accusative or ergative/absolutive. This is shown in figure 18 from Blake (1987:21-22). The accusative construction is most likely with pronouns; ergative constructions are most likely with inanimate nouns: the arrows show possible cut off points:

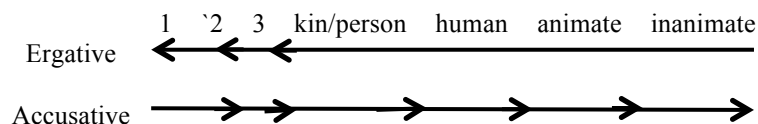


Figure 31: Hierarchy of nominal/accusative versus ergative/absolutive

Pitjantjatjara has been described as having a system of declensions with few irregularities (Hilliard, 1968:105-106). However from this study there do not appear to be declensions that group nominals and have different endings. As Myers (1978:13) notes, nouns in Pitjantjatjara have no gender or plural form. Rather the endings show case referring to function, and vary

depending on whether the head of a NP is a proper noun or not. There are also variants in ergative and locative cases for consonant endings, by assimilation of articulation. It can be seen that many of the peripheral case endings include the locative or instrumental in addition to the specific case ending, so these may be regarded as prepositional suffixes that have evolved into case endings.

Case marking is on the noun phrase, with the head noun and associated constituents within. Thus there is no case agreement within the NP for adjectives or other forms. Sub clauses and adverbs or manner are marked to agree with the NP they modify.

In English, there can be case marking on pronouns and the use of prepositions to mark case on noun phrases. Case marking and agreement rules depend on reference to macroroles and direct core argument status (Pavey, 2004). The P/Y case system similarly can be mapped to macroroles, both the core cases of ergative/absolutive and the peripheral cases which can be used to mark the undergoer. As discussed in chapter 3, Van Valin & LaPolla (1997:29) draw a distinction between direct core arguments and oblique core arguments. As seen here, P/Y marks these by case marking rather than prepositions as in English.

In P/Y noun phrases can be compounded, and the case marking can occur on the individual noun phrases or the compound. The enclitic pronouns are suffixed to the first constituent, which may be a compound noun phrase. Although verbs are central in the Western Desert language and sentences can be composed of verbs only (Douglas, 1958:21) the bound pronominals on the verb in a verb only sentence are not necessarily head marking arguments as described by Pavey (2010:79-81). In such a situation the clitics attach to the only structure in the sentence.

Pavey (2010:315-316) discusses basic constituent order, depending on two independent noun phrases and verb in a basic, unmarked sentence: declarative, active, predicate focus and noun phrases. From the study, P/Y appears to be head final, with the predicate after the undergoer, and thus SOV. The use of non-core cases means that some constructs that would be thought to be semantically transitive with an actor and undergoer are syntactically intransitive, leading to absolutive case on the sole argument. This is described as the antipassive (Blake, 1987:57ff).

5 Serial and multi verb constructs in P/Y - nexus juncture relations.

This section will investigate multiple verb constructs in P/Y. We will start with a description of the verbal system for simple clauses and follow with a look at the nature of more complex structures. The type of verbs that can be involved will be examined including the possibility of 'light verbs' (Blake, 1987:119) and semantic bleaching. An attempt will be made to characterise multi verb constructs as nexus junctures; we will look at what level and type are shown. We will also investigate whether any of these fulfil the criteria for serial verb constructions.

5.1 Verbs in P/Y

In P/Y tense, aspect and mood are generally indicated by suffixes on the verb stem. Goddard (1993:9) has these examples. There is no marking on the verb for person or number. Thus the role of the PSA in controlling verb agreement does not apply here. The PSA in ergative languages is the nominal in absolutive case.

- (54) Papa-ngku tjitji patja-ni
Dog-ERG child-ABS bite-PRES
'The dog is biting a child.'

- (55) Papa-ngku tjitji patja-nu
Dog-ERG child-ABS bite-PAST
'The dog bit a child.'

There are four different types of verb or conjugations in P/Y (Goddard, 1993:10-11). Bowe (1990:28) suggests these arose diachronically from reanalyses of the final consonants. These are summed up in table 4 based on Ninti Ngapartji (2009: lesson 7). The classes are often referred to as zero, *la*, *wa* and *ra* class based on the imperative form. Note that in each case there is a root and the particular form is constructed by appending the suffix.

Table 5: Pitjantjatjara/Yankunytjatjara verb conjugations

	(0)	(l)	(ng)	(n)
	('zero' class)	(la-class)	(wa-class)	(ra-class)
	'talk'	'bite'	'hit'	'put'
Imperative	<i>wangka-Ø</i>	<i>patja-la</i>	<i>pu-wa</i>	<i>tju-ra</i>
Past	<i>wangka-ngu</i>	<i>patja-<u>nu</u></i>	<i>pu-ngu</i>	<i>tju-nu</i>
Imperative (continuous)	<i>wangka-ma</i>	<i>patja-nma</i>	<i>pu-ngama</i>	<i>tju-nama</i>
Present	<i>wangka-nyi</i>	<i>patja-<u>ni</u></i>	<i>pu-nganyi</i>	<i>tju-nanyi</i>
Past (continuous)	<i>wangka-ngi</i>	<i>patja-<u>ningi</u></i>	<i>pu-ngangi</i>	<i>tju-nangi</i>
Future	<i>wangka-ku</i>	<i>patja-lku</i>	<i>pu-ngkuku</i>	<i>tju-nkuku</i>
Characteristic	<i>wangka-pai</i>	<i>patja-lpai</i>	<i>pu-ngkupai</i>	<i>tju-nkupai</i>
Serial	<i>wangka-ra</i>	<i>patja-<u>ra</u></i>	<i>pu-ngkula</i>	<i>tju-nkula</i>
Nominal form	<i>wangka-nytja</i>	<i>patja-ntja</i>	<i>pu-ngkunyntja</i>	<i>tju-nkunyntja</i>

In the next sections we look at multi verb sentences. P/Y has systems of clause linking, switch reference and dependent verb forms that express intention and purpose. We will look at these structures to look for evidence of juncture level and nexus type, and then look at the ubiquitous serialisation of verbs. Key to an understanding of multi verb constructions is an analysis of how arguments are shared out, and the scope of operators.

5.2 P/Y clausal juncture

In some Western Desert dialects there are separate coordinating conjunctions for same subject clauses and different subject clauses. Such syntactic constraints on coordination are

not the norm in Australian languages (Blake, 1987:137). P/Y shows these alternatives. Clauses can be joined (Goddard, 1993:25-26) by *munu* or *ka*. These are coordinating conjunctions for the same or different subjects respectively (ibid., Bowe, 1990:96ff) and reflect switch reference.

Munu suggests the same subject:

- (56) Wati-ngku papa pu-ngu munu mira-ngu
 Man-ERG dog-ABS hit-PAST and cried.out-PAST
 'The man hit the dog and he cried out.'

Ka implies a different subject:

- (57) Wati-ngku papa pu-ngu ka mira-ngu
 Man-ERG dog-ABS hit-PAST and cried.out-PAST
 'The man hit the dog and it cried out.'

This feature is unique to certain Western Desert dialects (Blake, 1987:147). As well as showing a different subject, *ka* can also be used in showing contrast, or a surprising development. Pavey (2010:229) says switch reference is an example of clausal cosubordination. In the P/Y examples however the operators have scope over their own clause and only share an argument so are more likely examples of coordination.

Arguments don't need to be shared. This example from Goddard (1996:84) shows clausal coordination, linking with *munu*. Each clause has its own subject and inflected verb without reference to the other, so there is no subordination or cosubordination.

- (58) Kuwari nyanga-la a-nanyi munu-la ngururpa ma-ngari-nyi
 Now this-1plNOM travel-PRES and-1plNOM on.the.way away-camp-PRES
 'Let's head off today and we'll camp overnight on the way (there)'

Ka and *munu* can also introduce sentences: note in this example from Goddard (1996:58) what might be core subordination in English is an adverbial phrase rather than subordinate clause as it contains no verbs:

- (59) Ka tjana mapalku kunkunari-pai, tjukurpa wiyantja kuwaripangka
 And 3plNOM immediately fall.asleep-HABIT story finish before
 'And they (children) slip off to sleep quickly, before the story's finished'

5.3 Dependent verb forms

P/Y has a system of dependent verb forms; these are summarised (Bowe, 1990:169) in table 5. Bowe (1990:71) suggests that these are subordinate forms to the main clause as they are embedded and not adjoined. Evidence for this includes the fact that the form can be moved within the main clause; an example is found in (61).

Table 6: Dependent verb forms

	(0)	(l)	(ng)	(n)
	('zero' class)	(la-class)	(wa-class)	(ra-class)
	'talk'	'bite'	'hit'	'put'
Purposive DS	<i>wangka-ntjaku</i>	<i>patja-ntjaku</i>	<i>pu-ngkuntjaku</i>	<i>tju-nkuntjaku</i>
Purposive SS	<i>wangka-ntjikitja</i>	<i>patja-ntjikitja</i>	<i>pu-ngkunttjikitja</i>	<i>tju-nkunttjikitja</i>
Anterior DS	<i>wangka-nyangka</i> (P) <i>nyina-nytja-la</i> (Y)	<i>patja-nyangka</i>	<i>pu-ngkunyangka</i>	<i>tju-nkunyangka</i>
Anterior SS	<i>wangka-ntjatjanu</i>	<i>patja-ntjatjanu</i>	<i>pu-ngkuntjatjanu</i>	<i>tju-nkuntjatjanu</i>
Anterior (Merged)	<i>wangka-ra</i>	<i>patja-ra</i>	<i>pu-ngkula</i>	<i>tju-nkula</i>
Negative	<i>wangka-wiya</i>	<i>patja-wiya</i>	<i>pu-ngkuwiya</i>	<i>tju-nkuwiya</i>

Switch reference features here as well. The Anterior Merged is of interest as it is the same as the serial form. We will look at the other dependent forms first, looking at Anterior Merged in the serial verb section. Wilkins (1988) discusses purposive clauses in the Australian language Mparntwe Arrernte and says they too are embedded not adjoined; furthermore that they can be arguments of the core. Referents are tracked by zero anaphora.

5.3.1 Purposive Different Subject (DS)

This is formed by the nominalised verb and *-ku* (purposive/possessive case ending). In this example from Goddard (1996:228) the PURP DS *ngkuntjaku* marking shows this to be a subordinate clause, modifying the core. The argument *untal* 'daughter' is shared, that it is the subject of the subordinate clause is indicated by the DS switch.

- (60) Mama-ngku untal watja-nu, mai yu-ngkuntjaku
 Father-ERG daughter-ABS tell-PAST, food give-PURP DS
 'The father told the daughter to give food.'

Bowe (1990:71) suggests the dependent forms are embedded not adjoined because they can occur surrounded by the elements of the main clause:

- (61) Trevor-lu Mary-nya a-nkuntjaku watja-nu
 Trevor-ERG Mary-ABS go-PURP DS say-PAST
 'Trevor told Mary to go.'

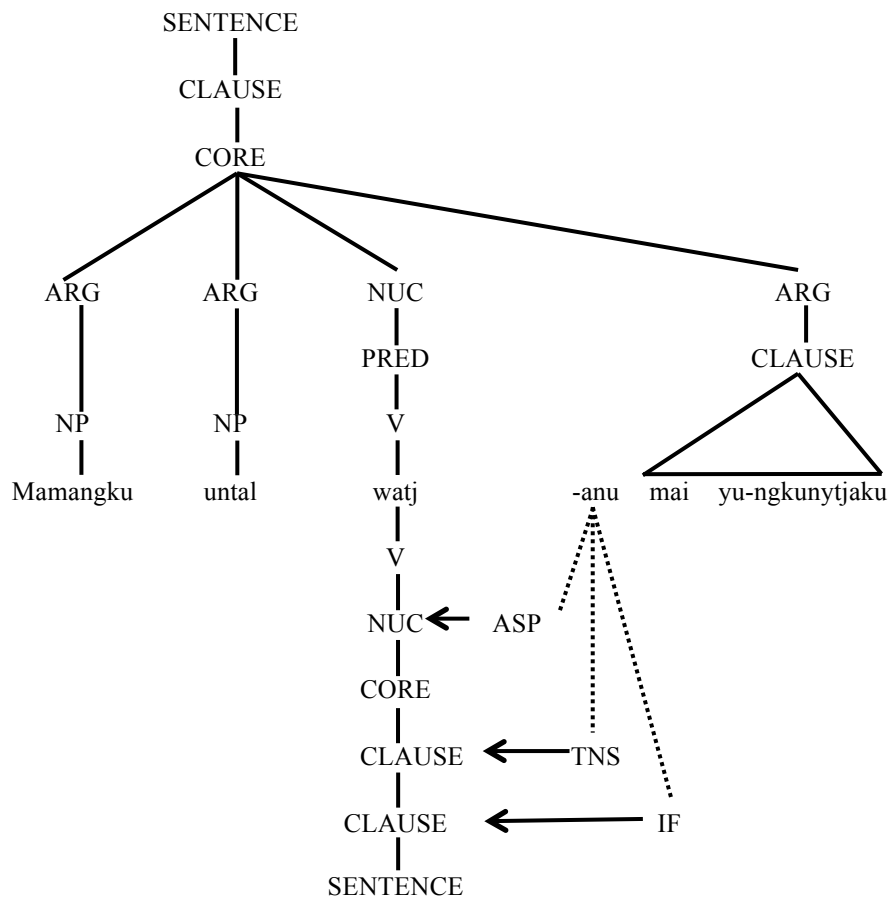


Figure 32: Purposive DS

5.3.2 Purposive Same Subject (SS)

This is formed by nominalisation and the suffix *-kitja*. The following is from Goddard (1993:31).

- (62) Ngayulu nyinakati-ngu, wangka-nyttji-kitja
 1sgNOM sit.down-PAST talk-NOML-*kitja*
 ‘I sat down to talk.’

We can see the logical structure is similar to that of the PURP DS structure:

do’(1sg,[sat’(1sg)]) PURP talk’ (1sg)

5.3.3 Anterior Different Subject (DS)

This is also referred to as the circumstantial clause, conveying ‘when’, ‘where’, ‘why’ (Goddard, 1993:29). Ninti Ngapartji (2009: lesson 13) gives it a connotation of ‘during, while’, but not ‘after having’ because it is DS. The subject of the main clause is different to that of the subordinate clause. There is a difference between the dialects in how this is constructed.

Yankunyjtajara uses nominalisation and the name locative:

- (63) Wati-ngku malu pau-ni, tjitji nyina-nytja-la
 Man-ERG kangaroo-ABS roast-PRES child-ABS sit-NOML-LOC
 ‘A man is roasting the kangaroo, while the child sits (there)’

Pitjantjatjara uses *-nya* and the ordinary locative. Goddard (1993:30) claims that this was originally *-nytja-ngka*, in other words nominalisation and locative.

- (64) Wati-ngku malu pau-ni, tjitji nyina-nya-ngka
 Man-ERG kangaroo-ABS roast-PRES child-ABS sit-*nya*-LOC
 ‘A man is roasting the kangaroo, while the child sits (there)’

A schematic of the relations between circumstantial clauses and main clauses is pictured in figure 20. The two clauses may be related by causality or by the simultaneity of events. The arguments between X and Y events may or may not be shared.

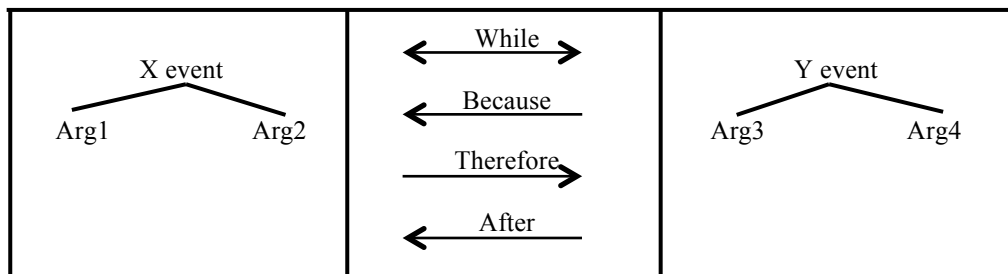


Figure 33: Circumstantial clause

5.3.4 Anterior Same Subject (SS)

This is formed by the nominalised verb and suffixing *-tjanu*. The connotation is ‘after’, ‘having’, ‘after having’ (Ninti Ngapartji, 2009: lesson 13).

- (65) Paluru rawa mulapa anku-nytjatjanu tjina pikatjarari-ngu
 3sgNOM for.a.long.time real walk-ANT.SS foot-ABS get.sick-PAST
 ‘After walking for some time his feet became sore’

The projections are shown in figure 21. In this example the subordinate clause precedes the main one.

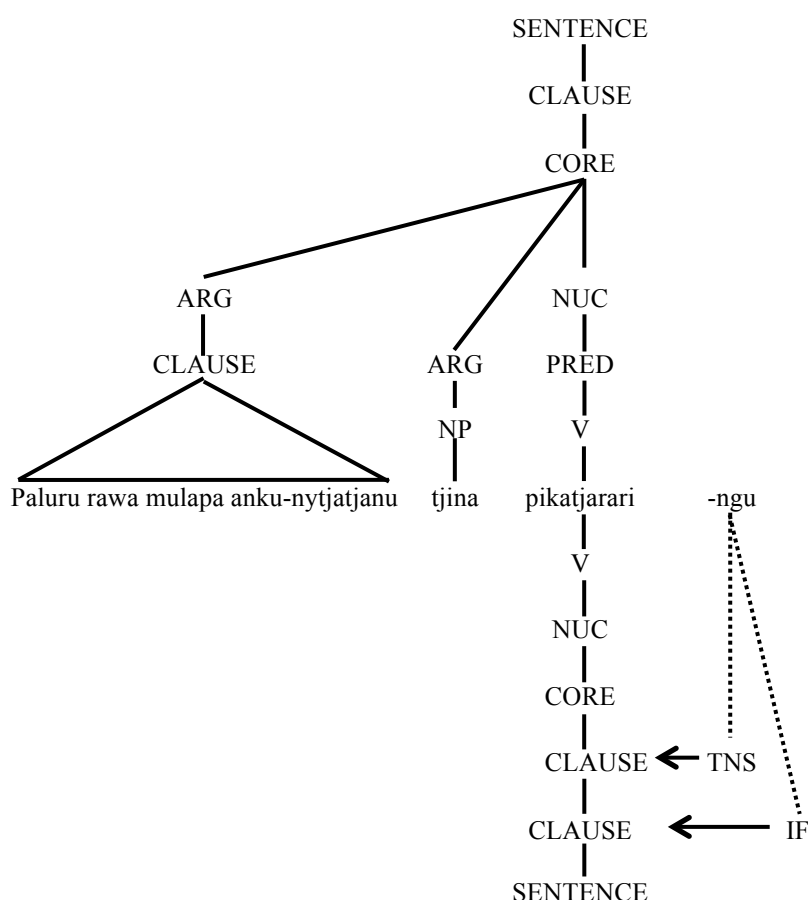


Figure 34: Anterior SS

5.4 Serial verb constructions

Serial verb constructions (SVC) are characteristic of some Asian, African and Austronesian languages and not typical of Indo-European. There are none in Europe or north or central Asia, and few in North America or Australia (Dixon, 2006:338).

Aikhenvald (2006:1) defines SVCs as a series of verbs acting as a single predicate, with no coordination, subordination or dependency. They may also share core and other arguments. Each component must be able to occur on its own, but they may have different transitivity values. Aikhenvald (2006:55) also states that prototypical SVCs share all arguments. Less tightly knit SVCs may lack argument sharing.

Payne (2006:288ff) draws a continuum from serial verbs with tight grammatical integration to looser coordination. Serial verb constructions have two or more verb roots that are not compounded and occur in the same clause. The second verb has no independent expression of subject or independent tense or aspect marking; the intonation is that of a single clause. Furthermore Payne (2006:290) states that serial verbs are a major diachronic source for auxiliaries, for instance ‘go’ indicating future tense. As the example in English ‘go eating’, the second, matrix verb describes the event and the first indicates the event is about to start. With two matrix verbs, one may become more auxiliary or half auxiliary and lead to two

functions coexisting. SVCs with core or nuclear level junctures can occur in different languages (Pavey, 2010:236).

The fusional or synthetic characteristics of a language can have an impact on the use of SVCs too. Isolating languages tend to have SVCs with independent components that may be discontinuous. Heavily polysynthetic ones have grammatically meaningful affixes on the verb rather than SVCs (Aikhenvald, 2006:53). As we have seen in chapter 5 P/Y is somewhat synthetic in using suffixes productively.

We will look at the serial form in P/Y, and discuss whether it fulfils the criteria for SVCs in Aikhenvald (2006:1ff) and Dixon (2006:339ff).

5.5 Serial verb form in P/Y

Goddard (1993:26-27) states that serial constructions are very common in P/Y, describing a series of actions, one after the other or simultaneously. This uses a form on the first verb known as the serial participle. Other authors use different terms to refer to the same form. Bowe (1990:89) calls it the anterior merged, while Eckert & Hudson (1988:307-309) refer to it as the ‘secondary’ form. In all cases the construction is of one or more verbs with the serial ending, and a finite verb that is typically clause final. We will look at the constructions these verbs are members of and see if they fulfil the criteria to be considered SVCs. In the examples below the verb stems are in bold and marked in the line below.

These first two examples are from Goddard (1993:26). We see that serial participles occur in imperative and statements; the mood of the sentence is determined by the last, finite verb. In (66) *waru* divides the two verbs. Implicit in (67) is that the subject *paluru* is shared.

- (66) Ya-nkula waru ura-la
v.....v
Go-SERIAL firewood-ABS get-IMP
'go and get firewood'
- (67) Paluru nyina-ra pata-ni
 v v
3sgNOM sit-SERIAL stay-PRES
'He's sitting/staying waiting'

Goddard (1983:99) divides serial verb constructions into loose and tight. Loose ones have verbs that may have their own arguments and modifiers; tight ones cannot be separated and may form a complex predicate that shares arguments and modifiers. Tight serialisation can be further divided into periphrastic and non periphrastic. These examples distinguish tight and loose serialisation in Yankunytjatjara (Goddard, 1983:103), starting with the tight:

- (68) Paluru nyiiinyii ya-nkula ura-nu
 v v
 3sgNOM zebra:finch-ABS go-SERIAL get-PAST
 ‘She went and got zebra finch (droppings)’.

As they are considered part of one nucleus, the logical structure is:

The constituent structure shows the arguments are shared; the tense and IF operators from the finite verb govern the entire clause, while the progressive aspect marks both nuclei:

[illegible]

The logical structure suggests she goes and then she gets zebra finch droppings:

do'(3sg, [**go'**(3sg)]) & **do'**(3sg, [**get'**(3sg, zebra.finch)])

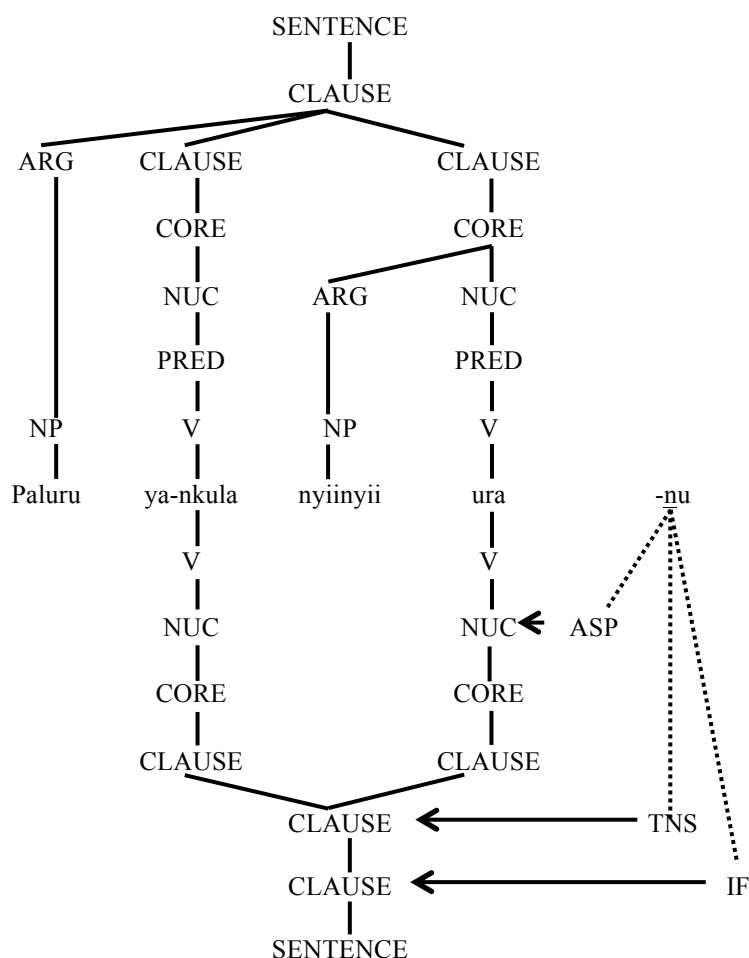


Figure 36: Clausal cosubordination with serial verb

In figure 23 we see that perfective aspect only has scope over *ura* ‘get’. The shared operators are at clausal level indicating clausal cosubordination. The argument *nyiinyii* now only belongs to the second verb. This is looser as the two verbs are split by an intervening argument.

The serial form *ya-nkula* is the same in both the imperative and statement sentences shown in examples (66), (68) and (70): the mood and tense of the cluster are governed by the finite verb. Blake (1987:129-130) notes that in Yankunytjatjara, verbs keep their lexical meanings and do not modify each other. These verbal clusters therefore indicate a series or simultaneous set of related actions. Subjects or objects can be shared, as befits serial verbs (Aikhenvald, 2006:3).

Non periphrastic tight serialisations (Goddard, 1983:100) are nuclear level junctures. Goddard (1983:104) cites the fact that directionals attach to the verb complex. In this

example *ngalya* ‘this way’ governs both nuclei. As directionals are nuclear operators they provide evidence that the nexus is cosubordinate.

- (71) Rupawila palu-la-nguru-mpa ngalya-ura-ra kati-ngu-lta
 v v
 Robb’s Well DEF-LOC-ABL-INTEREST this.way-get-SERIAL bring-PAST-
 AND.THEN
 ‘From Robb’s Well (he) came this way, gathering up (the escaped birds)...’

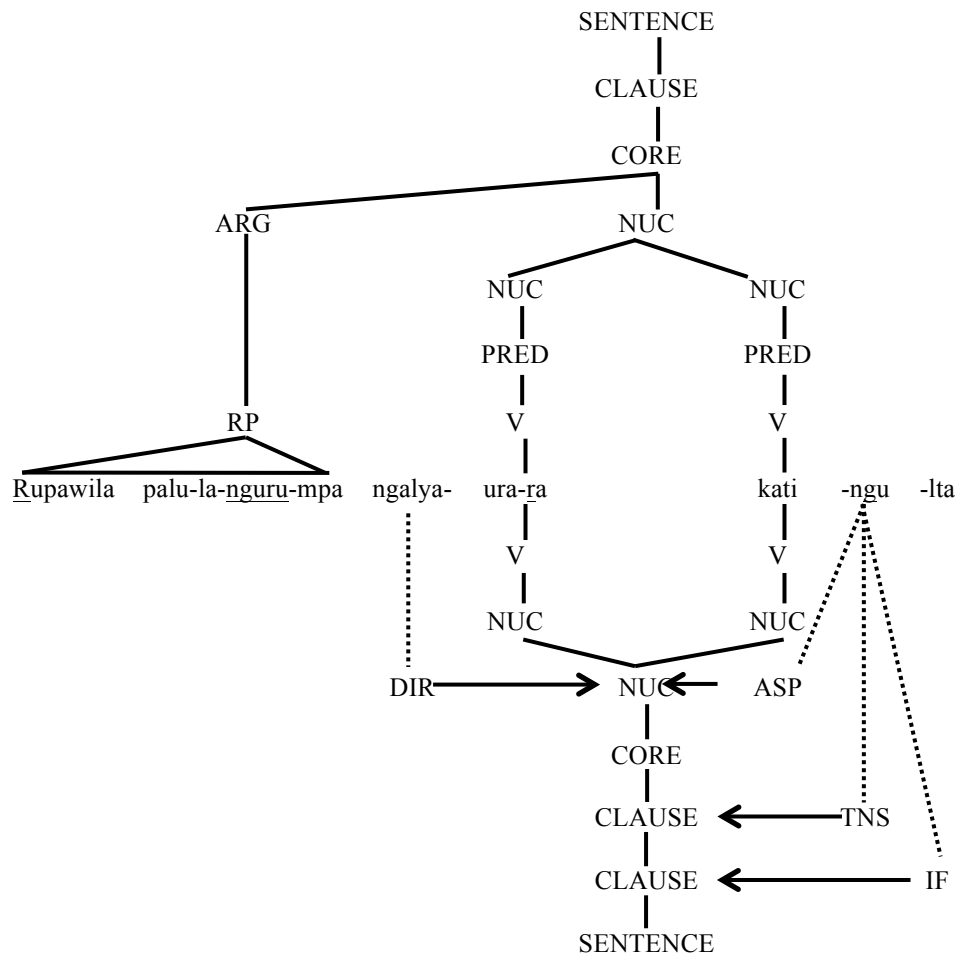


Figure 37: Non-periphrastic tight serialisation

Periphrastic tight serialisation has a serial verb and finite verb, but the finite verb has become lightened to act as an aspectual modifier although syntactically is still in nuclear juncture. The serial verb then determines the case of the subject, whether it is transitive or intransitive. Goddard (1983:104) has this periphrastic example. *Waninyi* appears to be bleached and serves to give aspect to ‘sit’:

- (72) Nyina-ra wani-nyi
 v v
 Sit-SERIAL throw-PRES
 ‘sitting around the place’

(73) Minyma tju_{ta} nyina-ra wani-nyi
 v v
 Woman many-ABS sit-ANT (MERG) cast.aside.PRES
 ‘Many women are sitting around all over the place.’



On the other hand the normally intransitive *nyina* ‘sit’ forms compounds that may be transitive:

- Goddard (1983:105) shows how the customary can develop from the periphrastic:

- (75) Wati-ngku kali atu-ra nyina-nyi
 Man-ERG boomerang.ABS chop-SERIAL sit-PRES
 'The man makes boomerangs.'

Goddard (1983:105) also has a category he calls ‘semi periphrastic’, as the serial verb determines the case of the subject but the finite verb still has some of its own meaning:

- (76) Wanyu-na kaa-ra arka-la
 v v
 JUST.LET-1sgNOM light-SERIAL try-IMP
 ‘Just let me try lighting it.’

Aikhenvald (2006:20) states that while the verbs in an SVC have no marker of syntactic dependency, there may be marking to identify it as an SVC, for example on all but the last verb. These are not considered markings of dependency, but indicate membership of the SVC. In the case of the tight serialisations in P/Y the serial suffix appears to fulfil this function.

Eckert & Hudson (1988:223) describe this use of the serial form in terms of a verb phrase, which describes one action and is pronounced together with no pause:

- (77) Tjitji tjuta a-nkula wiya-ri-ngu
Child many go-SERIAL NEG-INCH-PAST
'The children have gone out of sight.'

Loose serialisation is cosubordinate nexus at the peripheral or clause level; there may be separate arguments, but the same tense is signalled by the main verb. Since tense is a clausal operator, this indicates cosubordination. The serial participle gives no indication of tense or aspect per se. However a sequence can be implied, as in this example from Goddard (1983:101):

- (78) Munu-li Mimila-la ngari-ra, mungawinki maa-yana-nyi,
 v v
 And-1duNOM Mimili-LOC lie-SERIAL morning away-go-PRES,
 Intalka-ku-lta
 Indulkana-PURP-AND.THEN
 ‘And having slept at Mimili, in the morning we’ll go off to Indulkana.’

Eckert & Hudson (1988:220) call these ‘secondary verbs’ that form a sequence before a main verb. They are common in stories, allowing the narrative to flow:

A distinct pause changes this for some speakers. This suggests that this may not be a SVC as one of the criteria is a single intonation across the verbs.

- (84) Minyma, mai mantji-ra, ngalya-pitja-ngu
 v v
 Woman food get-SERIAL back-go-PAST
 ‘The woman, having got some food, came back.’

5.6 Causation

At the nuclear level, sentences with two nuclei are often used to express causative events (Pavey, 2010:221-222). For example if there are two predicates, one could be causal (V_{cause}) and the other the effect (V_{effect}). Cause and effect when expressed by two serialised verbs can combine to form one meaning. The second verb can describe the consequence or outcome of the event described by the first verb (Pavey, 2010:243). This is the case in French, for example (Robert, 1978:698):

- (85) Je suis venu travaill-er
 1sgNOM be.PRES come.PFV work-INDIC
 ‘I have come to work’

The logical structure shows purpose:

- (86) **do’**(1sg,[**come’**(1sg)]) PURP **get’** (1sg,work)

This is achieved in P/Y via dependent purposive subordinate clauses, with the same subject, for example Bowe (1990:75):

- (87) Trevor-nya paka-nu a-nkuntjikitja
 Trevor-ABS get.up-PAST go-PURP SS
 ‘Trevor got up to go.’

Again, PURP is shown in the logical structure:

- (88) **do’**(Trevor,[**get-up’**(Trevor)]) PURP **go’** (Trevor)

Alternatively some verbs can be used to show direct causation. This example is from French (Tallerman, 2005:206):

- (89) Jean a lu ce livre
 John read-PAST this book
 ‘John read this book’

The causative uses *faire* ‘to make’ and the infinitive:

- (90) Nous avons fait lire ce livre à Jean
 We have-PRES make.PAST.PART read.INDIC this book to John
 ‘We made John read this book’

Verbs such as *faire* in their capacity as [V_{cause}] are semantically bleached, in that their original meaning is lost and they are present only to indicate causation (Song, 1996:81).

Causative SVCs usually have the verb of causation preceding the main verb (Aikhenvald, 2006:16). In this *faire* appears quite typical.

Causation is another type of SVC in Chinese (Sun, 2006:205-206). Verbs that can exist on their own such as *qǐng/ràng/gěi/jiào* ‘invite/allow/give/call’ can be used as causative markers in an SVC. The NP between the two verbs is the undergoer of the first and the doer of the second; this is known as a pivotal construction.

- (91) Wǒ zuótiān qǐng/ràng/gěi/jiào le tā kàn diàn yǐng
 1sg yesterday invite/let/give/call PFV 3sg look electric shadow
 ‘I invited/let/allowed/made him (to) watch a film yesterday.’

P/Y makes use of the serial participle in this example, where there is an obligation to give (Goddard, 1996, 194).

- (92) Paluru tungunpu-ngkula ngatji-nu, ka-na yu-ngu
 3sgNOM press-SERIAL demand-PAST and-1sgNOM give-PAST
 ‘He pressed me to give it, so I did.’

In language generally, where events described by two predicates are closely interconnected, there is a tendency to have a more tightly connected syntactic structure (Pavey, 2010:245). In this example from P/Y (Goddard, 1996:238), the elements of [Vcause] and [Veffect] are independent lexical verbs, adjacent and contiguous, therefore COMPACT as in Song (1996:33). *witura* ‘insist’ and *iyani* ‘send’ combine to mean ‘get to go somewhere’. The first verb gets the serial participle, and they share arguments.

- (93) Ka minyma-ngku panya witu-ra iya-nu kungkawara
 And woman-ERG that insist-SERIAL send-PAST girl-ABS
 panya wati-ngka kuka mantji-ntjaku
 that man-DAT meat-ABS get-PURP DS
 ‘The older woman had the girl go get the meat from the man’

In this example the sense of ‘make’ is implied; a second verb is not required (Goddard, 1996:238).

- (94) Waru tju-nkula, mina-ku witu-nu minyma tjuṭa.
 Fire set-SERIAL, water-PURP tell-PAST woman PL
 ‘Set a fire, then got the women (to go) for water.’

This example using *paini* ‘forbid’ (Goddard, 1996:117) has two verbs, but they are not tightly bound as *patu* ‘far’ intervenes; the first verb is not serial, and the second verb is a dependent subclause:

- (95) Kami-lu-nanya pai-nu patu inka-nytjaku.
 Grandmother-ERG-1plACC forbid-PAST far play-PURP DS
 ‘Grandmother’s forbidden us to play far.’

Pavey (2010:234) states that some SVCs are cases of nuclear subordination. The second verb is lexical and subordinate, peripheral to the main nucleus. The study here shows that in cases where a serial verb construction is found, the nexus seems to be cosubordinate, as aspect is shared and governed by the finite clause. In contrast, Bowe (1990:74ff) describes the purposive and anterior circumstantial as being examples of subordination.

Aikhenvald (2006:1ff) and Dixon (2006:339ff) have several criteria for SVCs. These are that a sequence of verbs behaves like a single predicate with no overt marking for coordination or dependency. They should represent a single event, be monoclausal intonationally and have one tense and aspect. However some variations exist; they do not have to be contiguous and marking can be on one or every component. There are also symmetric and asymmetric SVCs where in the latter one of the constituents is from a restricted class. Aikhenvald (2006:20) also states that there can be a morpheme marking on all but the last verb to indicate membership of an SVC.

We see that the serial verbs in P/Y fulfil some of these criteria. The finite verb marks the tense and aspect of the whole construct and the serial participle in effect shows membership of a series of actions to different degrees of tightness. As we have discussed, the tight serialisation has periphrastic constructions where one verb appears just to show aspect. This is similar to the asymmetric SVCs where a verb from a restricted class is used, often one of motion or posture. Aikhenvald (2006:58-59) acknowledges terminological issues with SVCs; she quotes Goddard (1988) as referring to chained clausal structures as serial verbs. As there are some variations in the strict criteria, a particular serial verb construction in P/Y may be classed as an SVC depending on the particular form in question.

SVCs have similarities with other multiverb constructions such as monoclausal converbs and clause chaining as well as clause coordinated structures. So they are part of a continuum of multiverb structures (Aikhenvald, 2006:56). Other languages show similar phenomena. Taleghani (2010) shows how the progressive tense in Persian is formed periphrastically using 'have'; and that this is a SVC rather than an aspectual complex predicate where the main verb would be in stem form. The verb complex describes a single conceptual event and the verbs are not separated by complementisers or conjunctions.

P/Y also has periphrastic aspectual constructions too as noted, with *waninyi* serving to give aspect to the serial verb in the same complex (Goddard, 1983:104). This periphrastic construction in P/Y is the reverse of the case in some Formosan languages as reported by Yeh & Huang (2009). These languages can have three or more verbs in SVCs; some of the verbs may be adverbial or modifying of the final action verb. Guaraní has a continuum of degree in predicate chains (Velázquez-Castillo, 2004); there is a single macro event and modifying of co-verbs. The tight non periphrastic constructions in P/Y show a single event ('go get'), while the periphrastic ones have a finite verb providing tense and aspect to the serial verbs; there is no modifying of the verbs themselves.

6 Concluding discussion and significance

The objective of this paper was to look at the phenomenon of serial verb constructions in two dialects of the Western Desert language in Australia, Pitjantjatjara and Yankunytjatjara. Serial verb constructions themselves have not been thought to feature heavily in Australian languages though Dixon (2006:344) uses some of the SVC criteria to see if they occur in Dyirbal. As languages showing ergativity and agglutination Australian languages have features that differ from many European ones; so this work used RRG as a way of studying the case and inflectional systems and the system of affixation and cliticisation generally, allowing us to see what is going on in multi verb constructions.

We found that nominal case marking occurs on the noun phrase rather than the individual nominal, and serves to identify phrases as core or peripheral arguments. The nominals show ergative-absolutive contrast while the pronominals have a nominative-accusative system. Pronominals have dual number in addition to singular and plural. In this they are typical of Australian languages. Case marking is used for marking grammatical relations rather than the use of adpositions. There is also a system of pronominal clitics that have a strict order of affixation.

RRG is crucial to the analysis as with the constituent and operator projections we could determine the argument structure and scope of operators. The lexical decomposition allowed us to break down predicates and their arguments to their logical structure and semantic representation. In this way we could look at serial verbs to see if they shared arguments and aspect, and thus whether they represented nuclear junctures or single actions or a chain of clausal events. Can serial and multi verb constructs in P/Y be characterised as nexus juncture relations? By looking at grammatical markings on simple verbs, we can see their scope in multi verb and serial verb constructions and thus the types of juncture and nexus involved. We can characterise switch reference at clause and core level, dependent subordinate core level clauses and serial verbs at the clause and nucleus level.

Multiple verb sentences display switch reference in dependent verb forms and clausal linkage. A feature of both dialects is the very common use of serialised verbs. These can indicate a series of actions or a compound verb. The study of nexus juncture relations of the multi verb constructions shows there is tight and loose serialisation present and the tight serialisation has many of the characteristics for serial verb constructions. We have found that in serial verb constructions the finite verb marks the tense and aspect of the phrase, and the together with the serialised members show a sequence of actions. The subject is shared, though object and location may be separate for loose serialisation. Tight serialisation may be periphrastic where the finite verb has been lightened to act as an aspectual marker. The serial marked verbs are thus the lexical matrix verbs and determine the transitivity of the verb complex and the actions. This is significant because we can see that P/Y serial verbs exist in a continuum with the same system of suffixes whether showing nuclear or clausal cosubordination. In this they are perhaps not prototypical SVCs.

Causation in some languages is indicated by SVCs. P/Y is shown to use lexical causative verbs, suffixes as well as multiple clause constructs. There is a dependent clause with a

different subject that indicates indirect causation, in other words that the subject of the dependent clause has agency. Sun (2006:200-206) describes serial verbs in Chinese and draws a distinction between flexible order parallel constructions and inflexible order sequential constructions. In both types of construction aspectual markers cover all verbs in the SVC. In some cases initial verbs may turn into grammatical markers. This mirrors the periphrastic tight serialisation in P/Y.

This study points to some interesting areas of future research. Intonation is used in describing the contours of phrases. Further work might look at information structure over multi verb constructions and this would include how they are conceived intonationally in P/Y. As Aikhenvald (2006:1) states, one of the criteria for SVC is that intonationally they are like monoverbal clauses. A study of how the serial chains are spoken would aid in determining whether they are nuclear or clause level junctures. The focus projection could add to the work on arguments and how they are shared; whether the focussed argument belongs to one of the verbs or the entire complex. Word order is relatively free in P/Y so while the cases mark the macroroles and other parts of the clause, intonation and topicalisation could be used to draw attention to different parts of the sentence.

7 Abbreviations

ABL Ablative	FUT Future	PAST Past
ABS Absolutive	GEN Genitive	PFV Perfective
ACC Accusative	HABIT Habitual	PL Plural
ALL Allative	IMP Imperative	POS Possessive
ANT Anterior	IMPF Imperfective	PRES Present
AVERS Aversive	INCH Inchoative	PURP Purposive
CAUS Causative	INDIC Indicative	REP Reported
CONT Continuous	INSTR Instrumental	SERIAL Serial participle
DAT Dative	LOC Locative	SS Same Subject
DEF Definite	MERG Merged	TRANS Transverse
DEM Demonstrative	NEG Negative	TURN Turning point
DS Different Subject	NOM Nominative	VOC Vocative
ERG Ergative	PART Participle	

Pronouns

1, 2, 3	first, second and third person
sg	singular
du	dual
pl	plural

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